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ABSTRACT

This curriculum guide to Hawaiian Studies for fourth graders is designed to be used in conjunction with a social studies guide called "Early Hawaiian Life." The curriculum guide is divided into ten units dealing with the following topics: geography; migration-canoe building; land division; society and government--family; society and government--social structure; society and government--religion; food--agriculture; food--fishing; shelter; and kapa (barkcloth). Each unit is preceded by an overview section which presents at a glance the subject areas into which the Hawaiian Studies instruction is integrated (social studies, science, language arts, health, music art, games and recreation, and in one unit, math); the major lesson topics taken up within each subject area; student objectives; and references to unit appendices which contain teacher/student readings and worksheets, teacher background material, and songs and illustrations. The overview is followed by instructional activities and the appendices. An introduction to the guide includes discussions of the role of the teacher and the Kupuna (Hawaiian-speaking elders) in the program, and of the study of culture through dramatic inquiry. General appendices contain basic Hawaiian vocabulary lists, maps, a list of Hawaiian concepts depicted in the guide's artwork, and bibliographic materials. (KH)

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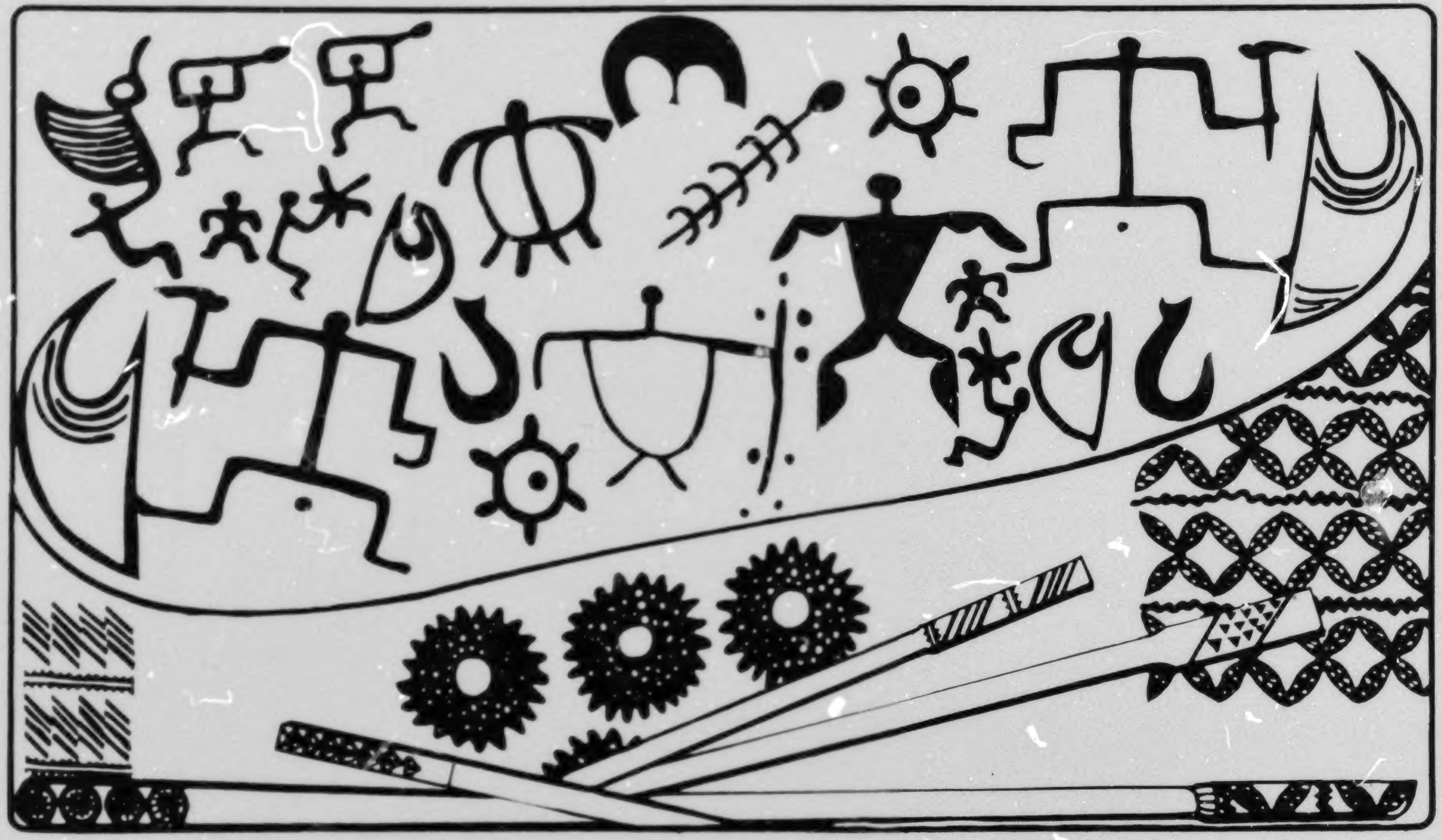
Hawaiian Studies Curriculum Guide



Office of Instructional Services/General Education Branch • Department of Education
State of Hawaii • RS 84-6010 • April 1984

GRADE 4

HAWAIIAN STUDIES CURRICULUM GUIDE, GRADE 4

HAWAIIAN SUTDIES PROGRAM
189 Lunalilo Home Rd., 2nd floor
Honolulu, Hawai'i 96825

Tel: 395-8782

EVALUATION NEEDED BY JUNE 15, 1985

EVALUATION FORM

(Photocopies may be used.)

Name (optional): ____________________

School/Office: ____________________

Grade/Subjects Taught: ____________________

Date: ____________________

Aloha kākou! As users of this Curriculum Guide, teachers and kūpuna teaching in the Hawaiian Studies program are requested to kōkua the Office of Instructional Services Hawaiian Studies program staff by taking the time to fill out this evaluation form after trying out the activities detailed in this guide. Please return the completed form to the address given above by June 15, 1985 so that comments can be used for future revisions of the guide and for preparation and presentation of appropriate and effective future inservice training activities based on this curriculum guide.

This guide must be used in conjunction with the grade 4 social studies guide, Early Hawaiian Life. Both guides were written by the Hawaiian Studies Curriculum Developer, a former fourth grade teacher. The purpose of this effort has been to provide fourth grade teachers with detailed lesson plans integrating instruction of Hawai'i-oriented content to support the teaching of concepts, skills, processes and values of the various general education program areas included in the units of this guide.

Suggestions and comments relating to content details, techniques for presenting a lesson, appropriate references, collaborative planning and lesson presentation by teachers/kūpuna, audio-visual instructional aids and any other concerns will be welcome. Additional sheets may be added.

A. In this section, please circle the rating number which is most appropriate. Comments may be made in the margin. Rating should be made on a scale of 1 to 5: 1-Strongly Agree, 2-Agree, 3-Undecided/No Opinion, 4-Disagree and 5-Strongly Disagree.

		SA	A	U	D	SD	Comments
1.	The material included in this guide is appropriate for grade 4.	1	2	3	4	5	
2.	The units provide enough activities to carry out Hawaiian studies instruction throughout the entire school year.	1	2	3	4	5	
3	The scope of the work in this guide is overwhelming to me.	1	2	3	4	5	
4.	In general, the supporting materials and references made me feel more comfortable in using this guide.	1	2	3	4	5	
5.	The overviews for each unit were helpful.	1	2	3	4	5	
6.	The Learner Objectives from the Hawaiian Studies Program Guide were easy to locate in the overviews for each unit.	1	2	3	4	5	
7.	In general, the work planned for grade 4 is made easier with the support of a kupuna teaching with me.	1	2	3	4	5	
8.	In general, I am satisfied with this guide.	1	2	3	4	5	

B. In this section, please feel free to expand upon your critiques, comments and suggestions. Additional sheets may be attached.

Unit I:

Unit II/III:

Unit IV:

Unit V^a:

V^b:

V^c:

Unit VI:

Unit VII:

Unit VIII:

Unit IX:

Vocabulary Lists:

Other comments:

FOREWORD

This *Hawaiian Studies Curriculum Guide, Grade 4* is the companion document to the social studies guide, *Early Hawaiian Life*, produced by the Office of Instructional Services in August 1981. This guide includes the other program areas into which Hawaiian studies content has been integrated. They are science, language arts, music, health, food and nutrition, art, games and recreation along with mathematics in one of the units.

Grade 4 has long been the grade level at which Hawaiian history, values, cultural practices, songs, dances and language have been taught to a certain extent in the public elementary schools. The Hawaiian Studies curriculum is designed to broaden that traditional course of study by providing specific learner objectives to be addressed during the year's instruction, detailed instructional activities integrated into the various subject areas and a great amount of teacher and student reference materials, games, worksheets, songs, stories and visual aids included as appendices to each unit. This latter is done in recognition that today's teachers are responsible for teaching a tremendous amount of knowledge, concepts, values, skills and behaviors with precious little time and energy available for doing the research needed to find the kinds of materials available at their fingertips in this guide.

As with any other State in the Union, the State of Hawai'i has mandated that the history and culture, including language, of our state be studied. In kindergarten through third grade, students are to study about our island state in relation to the Hawaiian and other ethnic cultures which blend to form our viable, unique local lifestyle. By the time the students reach the fourth grade, their intellectual maturity and developed sense of chronology permit them to study and understand various aspects of the culture of the original settlers of this *'āina* (land).

Teachers are encouraged to collaborate with their assigned *kūpuna* (Hawaiian speaking elders) to create an *'ohana* (family) environment in the classroom where the affective concepts detailed in this guide are used to heighten feelings of self worth and interpersonal esteem. As the students progress in this very important stage of their Hawaiian studies instruction, we hope that your students will acquire not only cognitive knowlege of pre-contact Hawai'i but, more importantly, a good attitude about learning which will motivate them to strive for knowledge and give them a better understanding about themselves and others in our multi-ethnic, multi-cultural native or adopted *'āina*, Hawai'i nei.

Francis M. Hatanaka

Francis M. Hatanaka
Acting Superintendent

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INTRODUCTION

The *Hawaiian Studies Program Guide* was written in response to the 1978 Constitutional amendment which mandates that "the State shall promote the study of Hawaiian culture, history and language." (Article X, Section 4) The total elementary school program is described in the program guide with learner objectives for each grade level, K-6. The learner objectives were developed from Part I and Part II Performance Expectations (PEs) which were found in *Student Performance Expectations of the Foundation Program*, RS78-6054, August 1978, Office of Instructional Services.

While elements of the Hawaiian Studies Program apply to each of the eight Foundation Program Objectives (FPOs), those FPOs most critically addressed by the program include:

FPO II	Develop positive self-concept
FPO III	Develop decision-making and problem-solving skills
FPO V	Develop physical and emotional health
FPO VII	Develop a continually growing philosophy that reflects responsibility to self as well as to others
FPO VIII	Develop creative potential and aesthetic sensitivity

The *Hawaiian Studies Curriculum Guides*, Grades K-6, have been designed to provide suggested activities and educational experiences within a Hawaiian cultural context which will help each student to develop an understanding of self and a sense of self-worth along with exposure to the bigger world of family and society in an upward spiraling continuum.

This continuum takes the child through an ever-enlarging study of self, self within the immediate *'ohana* (family), the immediate *'ohana* within the extended *'ohana*-type lifestyle enjoyed by many of our students from different ethnic backgrounds, the *'ohana* within the local community and, finally in Grade 3, the local community in comparison to communities throughout Hawai'i and the world.

The Department intends that children in the lower elementary grades learn about Hawaiian culture as it has survived into this modern age around us. Since many of these children in grades K-3 can not differentiate between events taking place in a time frame of two hundred years ago and those of a year or two ago, it was decided to delay the study of early Hawaiian life until their sense of chronology and history reached a certain level of development. Therefore, it is not until the fourth grade that Hawaiian culture of the pre-European contact era is studied in great detail. This is consistent with the social studies curriculum for that grade level and serves to lessen any disruption to the established curriculum that the introduction of the integrated Hawaiian Studies curriculum might pose.

Students in the fifth and sixth grades study U.S. history and world cultures respectively in their social studies classes. In Hawaiian Studies, students in the fifth grade have an opportunity to contrast their U.S. history study with a parallel study of Hawai'i during the same era. The four units cover Migration; Comparative Culture; Outsiders/Diseases/Immigration; and Hawaiian Poetry, Music and Dance. Hawai'i is a part of the United States and is studied as such. In the sixth grade, the students have an opportunity to study various cultures of the world in a Pan-Pacific perspective and the relationship of these cultures to Hawaiian culture. The other two important units of study at this grade level focus on the important resources, *ka wai* (fresh water) and *ka 'āina* (the land).

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This Hawaiian Studies Curriculum Guide, Grade 4, is to be used along with the fourth grade social studies guide, Early Hawaiian Life. There are a total of ten different units or subunits in this guide and each has an overview showing the unit emphases, learner activities, learner objectives and appendices to help teachers and kūpuna in planning interesting and effective lessons. These units include:

Unit I:	Geography
Unit II/III:	Migration - Canoe Building
Unit IV:	Land Division
Unit V^a:	Society and Government - 'Ohana
Unit V^b:	Society and Government - Social Structure
Unit V^c:	Society and Government - Religion
Unit VI:	Food - Agriculture
Unit VII:	Food - Fishing
Unit VIII:	Shelter
Unit IX:	Kapa

Each of these units has a corresponding unit in Early Hawaiian Life and together they provide a comprehensive coverage of learner objectives in the various subject areas. The emphases of each subject area in the unit are listed in the unit's overview. Teachers should read the overviews for a particular unit in both documents before planning their instructional activities. Since the use of the inquiry process, including dramatic inquiry, is an important part of the instructional methodology in both documents, a description of the process is included in the two guides.

This Hawaiian Studies Curriculum Guide focuses on presenting the culture, language and history of the early Hawaiians in an integrated course of study. The instructional activities were developed so that they could be taught in the various subject areas in a manner that unified the instruction and focused it on a specific topic.

For example, if a teacher wishes to instruct a social studies unit on the importance of kalo (taro) as a food product of the Hawaiians whose cultivation contributed to the economic stability of the society, there are related instructional activities to be addressed through the other subject areas that are presented in the columns over any two-page spread in the appropriate unit.

In science, the students can study specific technology employed in kalo production along with the importance of water and the hydrologic cycle.

In language arts, the students learn appropriate Hawaiian and English vocabulary and do creative writing.

In food and nutrition, the students study the nutritional value of the traditional Hawaiian staple foods and their place in the modern diet.

In health, the students do research on how plant foods and diet affect health and on what medicinal plants were used by the Hawaiians.

In music, the students compose their own lyrics about kalo and wai (fresh water) and sing traditional songs concerning these subjects.

In art, the students engage in crafts work relating to these topics and create artworks using various media to illustrate these themes.

In games and recreation, the students dance to a kalo cultivation song to learn what activities were involved in the planting and harvesting process and, if possible, take a field trip to an actual lo'i kalo (taro patch) to experience some of the cultivation activities.

Appendices to the units include readings and worksheets for teachers and students. Much teacher background reference material is also in the appendices along with songs and illustrations. Basic vocabuulary lists and maps are included at the end of the guide under "General Appendices." Bibliographic lists for teacher and student reference are included along with a detailed list of songs and chants included in this guide.

The Hawaiian vocabulary which is presented in lists for grades four to kindergarten was compiled with input from a number of program personnel. It is desirable that teachers and kūpuna structure their lessons so that these Hawaiian words are learned by the students before moving up to fifth grade. In general, active mastery of the words listed is expected unless it is noted that exposure is sufficient at this grade level.

Student mastery of Hawaiian vocabulary is just one aspect of the learner outcomes expected in the Hawaiian Studies program. It is not necessarily a major aspect but it is one area in which cognitive learning gains can be measured through vocabulary tests at various grade levels. The philosophy of the program includes the thought that a culture is best learned through the language of that culture.

Important affective domain concepts to be addressed in the Hawaiian Studies program include:

> Hawaiian concepts of aloha (love/greetings); kōkua (help, support); hau'oli (happiness); olakino maika'i (good health, well being); 'ike (recognition, feelings, understanding); kūkākūkā (reconciliation, talking things over); kuleana (responsibility, roles); kapu (rules, social control); alu like (social interaction, working together); hana (work); laulima (interdependence, cooperation); lōkahi (harmony in living); 'imi na'auao (seeking after knowledge); alaka'i (leadership); ho'okipa (hospitality); hilina'i (trustworthiness); no'eau (skillfulness, artistry, wisdom); mālama (conservation); and, aloha 'āina (love for the land and the people living on it).

There are many activities promoting these concepts provided to the teacher and kupuna throughout this guide. These are offered through an integrative, thematic approach so that the instructional activities can be carried out through a number of subject areas, addressing the concerns and performance expectations of the particular subject area and Hawaiian Studies at the same time.

These instructional activities have been reviewed and critiqued by the various educational specialists in the General Education Branch of the Office of Instructional Services whose valuable suggestions have strengthened the Hawaiian Studies curriculum presented here.

Instruction is to be carried out by the classroom teachers with the assistance of Hawaiian-speaking kūpuna (elders). These community resources have the expertise in Hawaiian culture, including language, and they are an essential element of the program at the elementary level. They are to teach Hawaiian language through an informal, culture-based aural-oral method of teaching in the beginning with progression made during the year toward a more formalized style of instruction focusing on reading and writing skills incorporating lessons, topics and plans developed collaboratively with the classroom teachers.

One major reason for hiring uncertificated community resources to teach in the public school classrooms is that these kūpuna possess expertise in Hawaiian language and other aspects of Hawaiian culture which complements the expertise of the classroom teacher in presenting a well-rounded and integrated program of study.

During training sessions, it is stressed to the kūpuna that they should structure their lessons based on ideas received from the teachers in collaborative planning sessions or through written communications if face-to-face meetings are difficult to arrange because of time constraints. They have the same curriculum guides used by the teachers and references to specific lessons and activities will help them to plan effective lessons which can be reinforced by the teacher during other instructional periods.

It should be noted that every attempt has been made to keep the content of this guide as free from sex-role bias as possible. However, roles defined by sex were an important and accepted part of the society of the early Hawaiians and this may be seen in some of the stories, pictures, or teacher reference materials. When appropriate, teachers may wish to point out such differences in early Hawaiian society and modern American society.

THE ROLE OF THE TEACHER IN THE HAWAIIAN STUDIES PROGRAM

The classroom teacher has the most important role in the implementation of the Hawaiian Studies Pro[illegible] the classroom. Through the use of this guide a[illegible]er resources, the teacher plays the key role in the integration of Hawaiian studies curricular materials and instruction. A teacher is free to choose those activities in this guide that meet his/her expectations and plan accordingly. The kūpuna is an important part of this teacher planning because the one hour instruction per week per class, which most kūpuna will be alloted, should be instruction that enriches the teacher's instructional activities.

It is the responsibility of the teacher to:

- provide instructional leadership to the kūpuna in the classroom;
- work cooperatively with the kūpuna to develop short- and long-range lesson plans based on the state's curriculum plans and the needs of the particular group of students;
- monitor the instruction of the kūpuna in order to give the kūpuna the benefit of the teacher's experience in lesson preparation, presentation and evaluation;
- participate in the instruction of the class in order to be able to follow up, review and reinforce those concepts, practices and vocabulary taught by the kūpuna;
- assist the principal in the evaluation of the work of the kūpuna;
- include, in the teacher's own instruction, those aspects of Hawaiian studies as are presented in the curricular materials.

THE ROLE OF THE KŪPUNA IN THE HAWAIIAN STUDIES PROGRAM

The kupuna has an important role in the Hawaiian Studies Program. Although a number of kūpuna teaching in the schools are over the state's mandatory retirement age for teachers, they have been accepted to work as Part-Time Teachers (PTT) at the current rate of compensation in this program because they represent within themselves the kinds of qualities and knowledge to which we want our students to have exposure.

Although some of the kūpuna are not readers nor writers of Hawaiian at a sophisticated level, and the majority of them did not complete their own secondary education, they nonetheless speak Hawaiian and have an education for living which they have picked up in their many decades of living in this Hawaiian environment. Most of them grew up in the households of their own kūpuna (grandparents), learning to speak Hawaiian as a native language and participating in the kinds of Hawaiian practices which are now only available to our teachers through written descriptions in books.

Most of them have as part of their own psychological and cultural make-up the kinds of Hawaiian values which are the subject matter of the Affective Strand of the Hawaiian Studies Program. Obviously, then, the selection of bonafide kupuna for a school is a very important responsibility of school/district personnel.

It is the responsibility of the kūpuna in this program to:

- teach the Hawaiian language component of Hawaiian Studies,
- work closely with the classroom teacher in planning lessons which present Hawaiian language and culture to the students in accordance with the year-long plan of instruction of the teacher for the particular grade level;
- attend inservice training sessions in order to learn some of the skills needed for teaching in the public school classroom;
- plan, carry out and evaluate the kūpuna's own instruction;
- work with the other kūpuna in the program to improve and expand cultural knowledge and Hawaiian language speaking ability on the part of all of the kūpuna;

- work cooperatively with district and state personnel who are charged with managing the program.

COLLABORATION BETWEEN TEACHER AND KUPUNA

Teachers and kūpuna are asked to draw upon their own experience and common sense in deciding what elements of these curriculum plans should be presented to the students of a particular school and classroom. Readiness is the key. Community resources and student interest are two other important aspects in deciding what kinds of lessons to plan and present.

The Department's Hawaiian Studies program seeks to give some validation and worth to the culture of the ancestors of many of the children in our public school system. It is hoped that the spark of motivation to learn through the academic system with the help of non-college trained teachers such as kūpuna and other community persons will be struck and grow strong in many of our students.

The program provides the opportunity for children to learn from kūpuna and kumu (teachers) and the kūpuna and kumu in turn to learn a great deal from one another and from their students and the students' families.

HAWAIIAN STUDIES PROGRAM ADMINISTRATIVE INFORMATION

Different school districts and communities located throughout the State of Hawai'i have varying needs and expectations relating to the Hawaiian Studies Program. Some of the factors affecting needs and expectations are the proportion of Hawaiians in the school population; the nature of the community, rural or urban; location of the school relative to the sea or to Hawaiian agricultural sites; established Hawaiian areas versus newly developed subdivision areas; and, the interest of the school's faculty and administration in the program.

In some areas, qualified kūpuna may be abundantly available, whereas in other areas administrators may not be sure where to begin looking. The following section is meant to provide some helpful suggestions on what to look for in a kūpuna; where and how to identify and recruit kūpuna; a recommended interview and selection process; and, some points to consider when scheduling kūpuna instruction.

Criteria for Selection of Kūpuna

The criteria identified in the initial OIS/Hawaiian Studies "Training Plan - Kūpuna" (October 1980) for the pilot year 1980-81 reflect the kind of person that should be identified, recruited, interviewed and selected for the Hawaiian Studies Program. Selected kūpuna reflect the following characteristics:

1. is a native speaker and fluent or near-fluent in the Hawaiian language;
2. is knowledgeable to some extent about Hawaiian culture in general and has knowledge of local history and cultural practices in particular;
3. is physically able to travel and to work on a regular basis in the classroom;
4. is able to develop rapport with classroom teachers and students;
5. is able to integrate Hawaiian language activities into the classroom program;
6. is able to relate other classroom activities into the Hawaiian language component of the program;

7. is willing and able to work collaboratively with the teacher(s) in order to plan lessons and activities which address the learner objectives of the Hawaiian Studies Program for the various strands in the particular grade level(s) involved;

8. is willing and able to share expertise in Hawaiian oriented activities within the school;

9. is willing to participate in classroom activities within the school; and,

10. is able to follow school procedures.

Identification of Kūpuna

Hawaiian elders and those of other ethnic backgrounds who are fluent native speakers of Hawaiian can be sought and identified in a number of ways. Some of these include:

- Contact the Hawaiian Civic Club, Senior Citizens group, or other such community organizations.
- Discuss the school's need with the *kahu* (pastor) of local Hawaiian churches.
- Ask for referrals from agencies such as Alu Like, Hawaiian Homes Department, and Queen Lili'uokalani Children's Center.
- Put an advertisement for Hawaiian speaking *kūpuna* in the daily newspapers and in the community newspapers.
- Ask for recommendations from the school community--PTA, custodial and cafeteria staff, teachers, booster clubs, and others.
- Broach the subject with likely looking prospects whom one sees in stores, at the beach, in the school office and elsewhere with the understanding that final selection is based on the interviewing process.

Interviewing and Selection of Kūpuna

Many, but not all, older Hawaiians in their late fifties, sixties and seventies can still speak the Hawaiian language. It should not, however, be assumed that every older Hawaiian can speak the language. Merely asking in English whether a prospective *kūpuna* speaks Hawaiian is not a safe way of assuring selection of high quality Hawaiian speaking *kūpuna*.

All candidates for the *kūpuna* positions should be interviewed by a board of three or four interviewers, one of whom should be an acknowledged fluent Hawaiian speaker. Assistance is readily available from the state staff if needed for this.

In the course of asking a set of prepared questions during the interview, the Hawaiian speaking interviewer should ask a question or series of questions dealing with the work of the prospective *kupuna*-teacher. This should be done within a conversational context and the questions should not be too technical in nature since the *kupuna* may lack the technical vocabulary in Hawaiian needed to discuss academic or school-related topics.

Questions could be centered around topics which the *kūpuna* might ordinarily be expected to teach in a classroom situation--songs, cultivating *kalo*, fishing, picking *limu*, preparing food, etc. How the prospective *kupuna*-teacher responds must be judged by the Hawaiian speaking interviewer and that judgement should play a large part in the selection of the *kūpuna* since one of the major criteria for selection is fluency or near-fluency as a native speaker of Hawaiian.

A test of reading or writing abilities in Hawaiian is not warranted since the *kūpuna* will be teaching in an aural-oral mode, however, all things being equal, *kūpuna* who can read and write Hawaiian should be selected over those who do not since many optional learning materials for the *kūpuna* relating to Hawaiian culture are available in Hawaiian language versions. The ability to read these materials from the last century and the ability to write lesson plans based on such materials will enhance the quality of the kūpuna's instruction.

Interviewees whose Hawaiian language speaking abilities are in question can be referred to state staff if desired and further interviewing in Hawaiian can take place in person or on the telephone.

Selection of kūpuna can either be made for a district pool, for specific schools or a combination of the two. Principals whose schools are involved in the program should be invited to take part in the interviews, either personally or through questions which they have submitted. The principals will presumably have referred some kūpuna for consideration based on contacts which they are able to make within their school communities.

Experience has shown that using kūpuna from the school community can have both positive and negative aspects. They will usually know and often be related to a number of children in the school. If they are natives or long-time residents of the area, they probably know stories about the area, the school and the people who have lived and worked in the area. They may be acquainted with legends, place names, important sites and other aspects of the area which would be helpful and interesting in making the Hawaiian Studies instruction more localized. Sometimes, kūpuna and/or their families have had unpleasant associations with the school or certain teachers in the past. Principals must inform themselves of such situations so that adjustments can be made in the kūpuna selection or assignment processes or in the scheduling process at the school level.

Scheduling of Kūpuna

The state standard for employment of Part-time Teachers (PTT) limits them to a maximum 17-hour week. Because the kūpuna are PTT there is no provision for them to work overtime or to receive mileage or other benefits. In order to use the Personal Services funds with the most cost effectiveness, it is essential that a principal schedule a kupuna into classes somewhat tightly with a minimum of lost time between classes. If teachers do not wish to release time for Hawaiian Studies instruction during the early morning hours when the children are fresh, the principal should then try to schedule the kūpuna into classes between morning recess and lunch or after lunch until the end of the school day.

The optimum contact time that leads to effective learning of Hawaiian Studies seems to be approximately an hour a week. This can be divided into three 20-minute sessions for the lowest grades or two 30-minute sessions for the middle and upper elementary grades. Teachers are encouraged to cooperate by having the students ready for the kūpuna and the kūpuna are encouraged to have a well planned lesson which can be presented with a minimum of delays and wasted time.

Like teachers who work past 3:00 p.m. or devote their weekend time to their students' extracurricular activities, kūpuna who get involved in the life of the school beyond the number of hours that they are scheduled, do so as volunteers.

HOW TO USE THIS CURRICULUM GUIDE

Each of the two units in this guide is preceded by an overview section which presents at a glance the subject areas into which the Hawaiian Studies instruction is integrated; the emphases or major lesson topics taken up within each subject area; the Hawaiian Studies Learner Objectives (from the Hawaiian Studies Program Guide) addressed in the instructional activities; and, the appendices which have been included to make teacher/student reference materials more readily available.

The same Learner Objective may be applicable and appear in the listed objectives for several subject areas. The number of Learner Objectives listed for any particular subject area does not necessarily mean that that subject area is any more important in Hawaiian Studies instruction than another.

CULTURE STUDY THROUGH DRAMATIC INQUIRY

What is the best way to study another culture? Anthropologists say that one must take oneself out of one's culture and into another culture in order to get an inside view. One way of experiencing another culture is through the process of dramatic inquiry. This is a systematic approach to learning about another culture through dramatization. In this process, the students are encouraged to dramatize possible uses of cultural artifacts within an arranged environment and to explore ideas and inquire about the life processes of a culture.

The following outline suggests the possible sequence of activities:

1. An Arranged Environment - An array of familiar as well as unfamiliar Hawaiian artifacts and equipment is displayed. Examples:

   'umeke (bowls), ko'i (adzes), 'upena (nets), lūhe'e (octopus lure), 'ō'ō (digging stick), mea kaua (weapons) and mea hana (tools).

   The children are invited to explore and handle the objects, to discuss and to hypothesize how the articles were used.

2. Dramatization -

   A. The children select one object each and think about how that object might have been used in ancient Hawai'i.

   B. The classroom is divided into 3 areas:

      1) Uka - the mountains/uplands
      2) Kula - the midlands
      3) Kai - the sea

   C. The children decide in which area they would have used their object if they were living in ancient Hawai'i.

   D. They dramatize how the objects were used in their areas. A recording of a chant may be played to create an atmosphere that suggests ancient Hawaiian living.

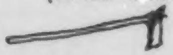
   E. The groups share their dramatizations with the entire class.

3. Expression of Needs -

   A. The students discuss their experiences and questions are raised and recorded on charts. Record all of their questions without giving away the names of the objects.

      Example:

      What is ? (Draw the object the child refers to; avoid giving the name of the object.)

      What was  used for?

   B. The questions then become the basis for the year's program.

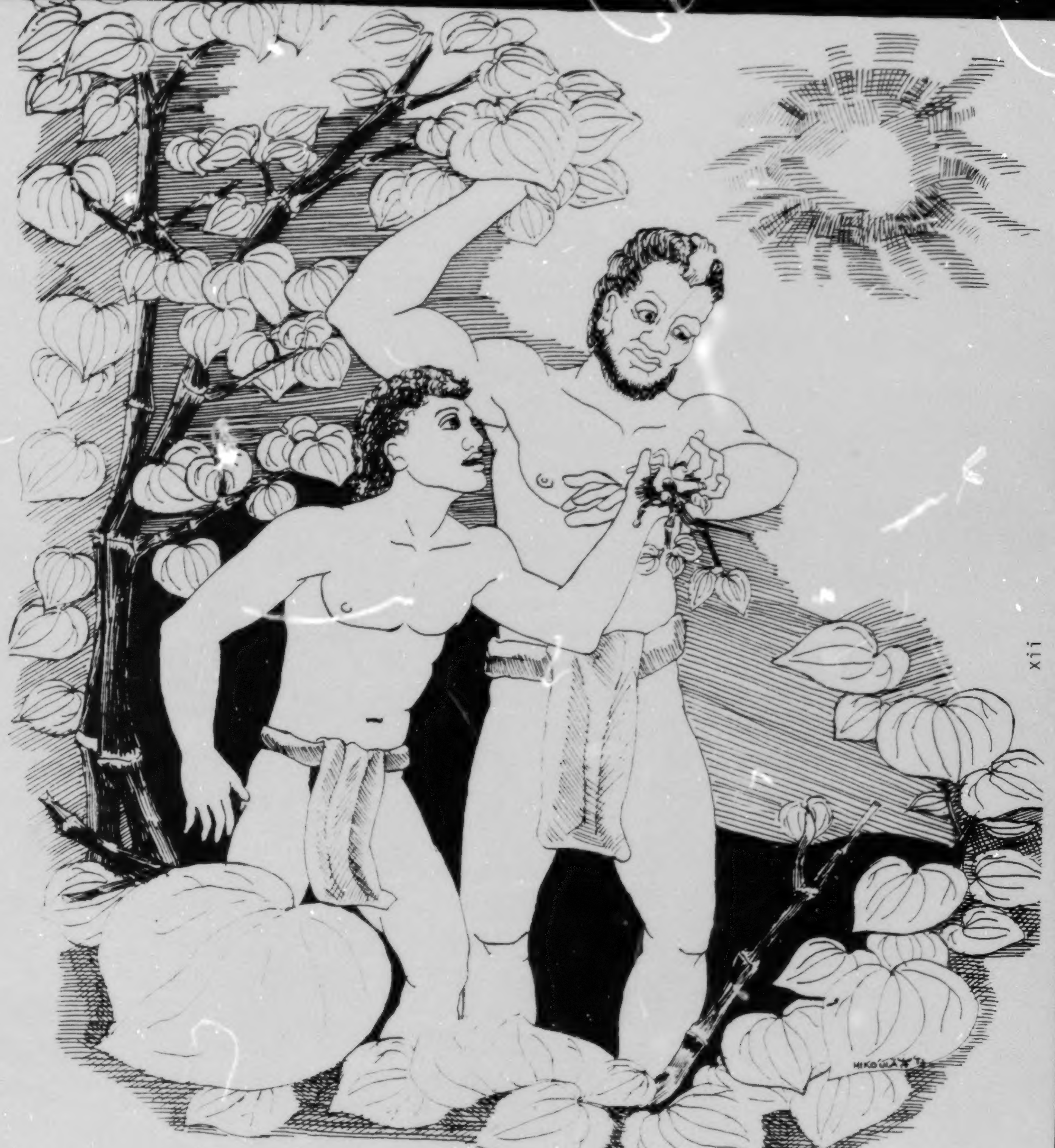
   C. The questions can be grouped into workable research groups by the children. Example: Which questions seem to go together?

4. Series of Learning Activities - The teacher and students plan activities for gathering information. They also plan which area of Hawaiian culture to study first based on the students' interests and the dramatization. The activities may include:

   resource speakers
   research - individual and group
   field trips
   audio visual research
   experimentation

5. Further Inquiry - The children share the information learned through participation in learning activities. This leads to further dramatizations on a higher level of thinking and the entire process repeats itself.

Once the sequence of activities has been completed, it leads back to the original situation where an arranged environment should be established and the cycle begun all over again dealing with new questions which the students needed to discuss, dramatize and research. These cycles continue on more complex and accurate levels which refine the students' knowledge and skills.



‘IMI NA‘AUAO

TABLE OF CONTENTS

Foreword i

Introduction iii

The Role of the Teacher in the Hawaiian Studies Program vi

The Role of the Kūpuna in the Hawaiian Studies Program vi

Collaboration Between Teacher & Kupuna

Criteria for Selection of Kūpuna

Identification of Kūpuna

Interviewing and Selecting Kupuna vi

Scheduling of Kūpuna vii

Collaboration between Teacher and Kūpuna

Culture Study Through Dramatic Inquiry viii

Unit I Geography 2-25

Map skills, geology, climate, population

Appendix A Geologic History of a Volcanic Island 26
B Effects of Erosion 27
C Hawaiian Terms for Island Formation 28
D "How Hawai'i Was Divided" (Story) 29-30
E Hula 31-33
F "'Ōpae E" (Song) 34
G Nā Makani (Winds) 35
H Nature Vocabulary 36
I Petroglyphs 37
J Petroglyph Samples 38-39

K Basic Hula Steps 40-41
L "Aia Lā 'O Pele" (Hula kahiko) 42
M How to Teach Chants/Songs 43
N Kāholo (Vamp) Using the 'Ili'ili 44-45
O "E Pele, E Pele" (Hula kahiko) 46

Units II-III Migration - Canoe Building 47-71

Polynesian migration, ethnic migration, canoe building, population dynamics, Polynesian-Hawaiian skies, winds, currents and clouds

Appendix A "Hoe Aku I Kou Wa'a" (Chant) 72
B "Navigation" 73-75
C Hawaiian Seabirds 76
D Basic Food Chart 77
E Nutritional Value of Food in Hawai'i 78-79
F Food for the Athlete 80-81
G Myths About Food 82
H Hawaiian Vocabulary for Clouds and Weather 83
I Musical Compositions about Hōkūle'a 84
J Journey of Hōkūle'a 1980 85

Unit IV Land Division 86-96

Economic organization - method and units of land division, utilization of land and interdependence/roles of 'ohana (family) members

Appendix A Worksheet for Plant Research 97
B Nā Mea Kanu 98-105

Unit V^{a} Society and Government - 'Ohana 106-115

Characteristics and functions of the 'ohana, 'ohana concepts

Appendix A "Aloha" (Song) 116
B "Alu Like" (Song) 117
C Nā 'Ōlelo Nāne 118
D Nā 'Ōlelo No'eau 119
E The Hawaiian Chant 120

Unit V^{b} Society and Government - Social Structure 121-134

Kapu (law) system and monarchal government of early Hawai'i versus that of today, class system, importance of genealogy chants, mele inoa (chants for ali'i) and mana (spiritual power)

Appendix A "Lili'u E" (Song) 135
B "Ka Na'i Aupuni" (Song) 136
C Mo'okū'auhau o Kamehameha 137-139
D Mo'okū'auhau o Kalākaua 140
E Mo'okū'auhau o Kawananakoa-Kūhiō 141
F Birth Chant for Kauikeaouli 142-150

Unit V^{c} Society and Government - Religion 151-171

Relationship of religion and government, symbols of royalty, medicinal plants, akua (gods), 'aumākua (family guardian spirits) and kupua (demi gods), and the Makahiki Festival

Appendix A "Ho'okupu Chant" 172
B Ka Makahiki 174-175
C Medicinal Plants 176-177
D Birds of Hawai'i 178-179
E Ka Helu Hawai'i - Hawaiian Enumeration 180-181

Unit VI Food - Agriculture 182-195

Food plants of early Hawai'i, cultivation of *kalo*, methods of cooking, food exchange system, importance of *wai* (water) in the development of communities, and conservation techniques

Appendix A "*Maika'i, Mahi'ai!*" (Story) 196-197
B Worksheet - Medicinal Uses of Plants 198-199
C Nutritional Value of Hawaiian Plant Foods 200-201
D "Huki I Ke Kalo" (Chant) 202

Unit VII. Food - Fishing 203-231

Methods of fishing, areas of fishing, *kapu* and rituals, sharing system, ecosystem of fishponds, habits and anatomy of fish

Appendix A Hawaiian Seafoods 232
B Sea Life Report 233
C "Humuhumunukunukuapua'a" (Song) 234-235
D Fashioning a Fishhook 236
E "Life in Ancient Hawai'i - Foods" - A Supplement 237-242
F "Kanaka Lawai'a" (Game) 243-247
G "Go to the Head of the Fish" (Game) 248
H Answer Sheets for Appendices F/G 249-251
I Making *Hau* Cordage 252
J Fishing 253-254

Unit VIII. Shelter 255-264

The Hawaiian *kauhale* (housing compound community), location of *nā hale* (houses), process of building, furnishings, roles of religion and *'ohana*, choosing the correct location

Appendix A The Hawaiian Homestead/Pictures of *Ke Kauhale* 265-268
B *Ka Hale* (Diagram of the framework of a *hale*) 269
C "Maika'i Ka Makani O Kohala" (Song) 270

D Teaching Ipu Rhythms 271-272
E Ka Mokupuni 'O O'ahu (Map) 273
F "You Come My House" (Song) 274-275

Unit IX. Kapa 276-283
Process of making kapa, tools, resources, uses, dyes, steps involved
Appendix A Experimenting with Plant Dyes 284
B "Hohoa Kuku" (Song) 285-286

GENERAL APPENDICES

Basic Vocabulary Lists, Grades 4-K 287-300
Maps:
- The World/Islands in the Pacific Area 301
- United States/The Hawaiian Islands 302
- A Schematic History of O'ahu 303
- Cross Section of O'ahu/Mokoli'i Island 304
- Effects of Erosion/A Geologic History of a Volcanic Island in the Pacific 305
- Contours 306
- Kaua'i 307-308
- O'ahu 309-310
- Maui/Kaho'olawe 311-312
- Maui/Moloka'i/Lāna'i 313-314
- Hawai'i 315-316
- Precipitation maps of Kaua'i, O'ahu, Hawai'i 317
- Precipitation maps of Maui, Moloka'i, Lāna'i and Kaho'olawe 318

Hawaiian Concepts Depicted in Artwork in this Guide 319
Bibliography of Teacher and Student References 320-323
Suggested References for Teachers 324
Discography of Phonographic Recording References 325
List of Film References 326
Songs and Chants 327-330

The following lessons were developed to accompany the Social Studies 4th Grade Guide, Early Hawaiian Life, pp. 14-31, Grade 4, Unit I

CONTENT AREAS	EMPHASES
SOCIAL STUDIES	Map Skills The cardinal directions: North, South, East, West Locating places on maps using longitude and latitude Computing distances on maps using mileage scales Reading a variety of maps for information Identifying geographical features: isthmus, peninsula, lake, canyon, bay, swamp, volcano The Eight Islands Geographical features of each island History of the settlement and population growth Economic development Places of interest
SCIENCE	Geology of the Hawaiian Islands Volcanism and erosion Four types of islands: volcanic, coral reef, elevated reef, continental Erosion processes Effects of wind, rain, surf, temperature changes Geologic formation of high volcanic islands Volcanic buildup, erosion, development of coral reefs Coral reef study The ecology of a Hawaiian reef Impacts of environmental changes

LEARNER OBJECTIVES	APPENDICES
• Identifies the eight (8) major Hawaiian islands with their important mountains and locates them on a map. • Compares the major southeastern islands in the Hawaiian chain to those islands, islets, atolls and reefs in the northwestern section of the chain. • Identifies geographic features from a map of Hawai'i and explains how these have affected the way of life. (See Early Hawaiian Life, pp. 21-22 for other objectives.)	
(See Science in Hawai'i a Fourth Grade ETV Guide for Science objectives, pp. Dl and Tl) • Describes the basic geologic formation of high volcanic islands such as the Hawaiian islands and other high island groups in Polynesia (Society Islands, New Zealand, the Marquesas, and the Samoan islands). • Exhibits a curiosity and excitement about the bio-physical environment. • Uses scientific knowledge, processes, instruments, and language to clarify values, examine issues and solve problems within a Hawaiian environment. • Uses inquiry processes to study the Hawaiian environment. • Researches and identifies creatures and plants of Hawai'i's sandy and rocky shores.	Unit I - A A Geological History of A Volcanic Island in the Pacific p. 26 - B Effects of Erosion p. 27

CONTENT AREAS	EMPHASES
ANGUAGE ARTS	Creative writing Legends of origin (of natural phenomena) Reading and interpreting legends Letter writing Word associations Comparing Maui legends with Pele legends Reference skills
EALTH	Effect of location and climate on the health of people Nutritional values of seafoods from the reefs
USIC	Singing songs about natural phenomena with instrumental accompaniment: "Hilo Hanakahi" (about the winds, rains, seas) "Ke Ānuenue" (about the rainbow, rains, plants, sun) Songs of the eight islands Songs about reef life: "Ku'u Pūpū Kau Pōhaku" Chants about Pele: "E Pele" "Aia Lā 'O Pele"

LEARNER OBJECTIVES	APPENDICES
• Describes some of the natural phenomena in Hawai'i using their Hawaiian names. • Describes some of the physical landmarks and attributes of Hawai'i, natural and human-made, using their Hawaiian names (cliff, mountain, fish pond, river). • Identifies some legendary figures such as Pele, Maui and Hina, Hi'iaka and Lohi'au and discusses some of the stories connected with these figures.	Unit I - C Hawaiian Terms for Island Formation, p. 28 - D Story: "How Hawai'i Was Divided" pp. 29-30 - H Nature Vocabulary, p. 36
• Participates in drownproofing or water safety programs. • Recognizes the nutritional value of seafood.	
• Performs from memory a simple Hawaiian chant. • Sings selected Hawaiian songs introduced by the teacher while playing rhythmic or harmonic instruments in time with the beat. ('ukulele, ipu, pu'ili, kāla'au, kā'eke'eke or 'ili'ili. • Creates melodies and lyrics concerning a Hawaiian theme using English and Hawaiian words, expressions and phrases. • Indicates how much of our knowledge of former times have been learned from chants to the gods or chants of and for the chiefly class. • Relates the importance of the chanters and dancers to life in old Hawai'i. • Explains that chant was the original Hawaiian vocal music and that instrumental Hawaiian music, as we know it today, was influenced by all the immigrants who later came to Hawai'i bringing new ways of singing and new instruments with which to add harmonics and texture to music.	Unit I - F "'Ōpae E", p. 34 - G Nā Makani (The Winds), p. 35 - K Basic Hula Steps, pp. 40-41 - L "Aia Lā 'O Pele", p. 42 - M How to Teach Hawaiian Chants and Songs, p. 43 - N Kāholo (Vamp) Using the 'Ili'ili, pp. 44-45 - O "E Pele, E Pele", p. 46

CONTENT AREAS	EMPHASES
ART	Diorama Petroglyphs Sculpturing - papier mâché Collage Producing a filmstrip 3-Dimensional art "Life on a Coral Reef"
GAMES AND RECREATION	Creative body movement Interpretive movements depicting volcanic eruption and flow Hawaiian games using materials from the natural environment Dance - Hawaiian and other ethnic groups Hula about volcanism, Pele and other natural phenomena Ethnic dances from cultures represented by students in class Hula about creatures living in the coral reef

LEARNER OBJECTIVES	APPENDICES
• Discusses the possibilities of petroglyphs being art, communication, and/or historical documentation.	Unit I - I Petroglyphs, p. 37 - J Petroglyph Samples, pp. 38-39
• Performs more advanced or complicated body movement patterns in games and dances. • Responds imaginatively to accompaniment expressing feeling or emotion. • Creates new steps, body movements or verses to dances.	Unit I - E Hula, pp. 31-33

The following lessons should be used in conjunction with the Social Studies lessons found in Early Hawaiian Life, pp. 14-29.

Grade 4, Unit I

SCIENCE

- Science activities to help children understand the forces of erosion.

1. Describe the four types of islands in the Pacific Ocean:

    a. Volcanic
    b. Coral reefs
    c. Elevated reef islands
    d. Continental islands

    Have some pictures of these types of islands available for the children to use.

2. Ask:

    a. How did such hard rock islands become inhabitable?

    b. What natural forces or phenomena caused the break-down of the rocks?

    c. What is this process called? (erosion - ka 'a'ai 'āina)

3. Research

    Geography and Geology of Hawai'i, #2, pp. 6-8, TAC 71-2306

    a. Have the children experiment and conduct research to learn more about this process of erosion...

        - the actions of air and water
        - the changes in temperature

LANGUAGE ARTS

- Language activities that help build skill using the study of geography and geology as the basis.

1. Creative writing - "Legends of Origin"

    a. Have the children think about some natural feature on their island - a mountain peak, a stone formation, a hole through a mountain. Ask if anyone knows the Hawaiian equivalent for "rock, stone." Introduce the word pōhaku to them and have them describe some rock formations.

    b. Encourage them to think about how that natural formation came to be. Motivate them to jot down their thoughts on a piece of paper.

    c. Formulate a special format for these tales by previewing other simple legends with the children. Through discussion, decide on an outline format for the legend.

        1) Description of the location of the landmark
        2) Introduction of the characters in the legend
        3) Buildup of the action
        4) Climax
        5) Closing

HEALTH/FOOD AND NUTRITION

MUSIC

- Music activities that deal with songs written about natural phenomena. See: Appendix Unit I-M, p. 43.

1. Singing to the beat of the ipu. Selection: "Hilo Hanakahi" Source: Elbert and Māhoe, Nā Mele o Hawai'i Nei, p. 50.

   a. Talk about the various winds and rains known on Hawai'i (the island)

      1) Makani Kuehulepo
      2) Makani 'Āpa'apa'a
      3) Ua Kanilehua
      4) Ua Kīpu'upu'u

   b. Use the translations as presented in the book.

   c. See Appendix Unit I-G, p. 35 for names of some winds. Listen for correctness and clarity in pronunciation. Use kupuna, if available.

   d. Use an ipu to keep the beat of the song.

   e. Teach the 'ukulele accompaniment for the song. F(2), F^7(4), B^b(4), F(8), G^7(2), C^7(2), [illegible])

2. Learning a song and hula with the accompaniment of the

ART

- Art activities to illustrate projects studied in this unit on the geography and geology of Hawai'i

1. Diorama - see "Legend of Origin" in language arts lesson, p. 8.

   a. Materials needed: paints, brushes, paper strips, wheat paste, rocks of different sizes, variety of other materials.

   b. Have the children bring in their own box filled with things which they would like to have in their diorama.

   c. Encourage them to plan their diorama on a sheet of manila paper. Talk about composition, color combinations and lines. Encourage them to be creative and innovative.

   d. Help individuals to make good use of space.

   e. Display the finished products in the school library along with the

GAMES AND RECREATION

- Creative activities allowing children to respond imaginatively to accompaniment, expressing feeling or emotion through body movement.

1. Creative movement:

   a. Select an instrumental musical piece (does not have to be Hawaiian) that musically suggests the volcanic eruption and flow.

   b. Motivate the children for this activity by showing them a film on volcanic eruptions as listed in Early Hawaiian Life, p. 29. Show the film using no sound.

   c. Having shown the film, play the musical selection for the children. Have them listen for volcanic activity and dramatize their feelings with their bodies without using any speech.

   d. If floor space allows, have the children close their eyes so that they will feel free to be creative.

   Suggested musical Selections:

   "Storm on Lake" in the William Tell Overture
   "Storm" from The Grand Canyon Suite

   e. After the students have had some time to move creatively, have them imagine the activities of Pele, the volcano goddess, as she causes the volcano to erupt. Share with them the chant, "E Pele, E Pele," on page 46 (Appendix Unit I-O). For a tape of the chant, inquire of the Hawaiian Studies Resource Teacher in your district. Also, see page 17.

2. Using pōhaku in games and sports of old Hawai'i

   a. See: Mitchell. Hawaiian Games for Today. This is an excellent book of early Hawaiian games. The directions are simple and easy to follow.

SCIENCE

- the effect of running water, wind, and ice on earth and rock
- weathering - chemical and physical action

b. Experiment with these causes of erosion in or out of the classroom. Have the children conduct experiments to show the effects of the physical forces on soil and rocks.

c. Go on a walking trip in the community to observe erosion. Take pictures.

d. Encourage the children to look for locations of erosion as they go on car or bus rides and to note the location on a map of the community.

See Appendix Unit I-B, p. 27.

e. Retrieval

   1) Discuss the kinds of things observed.

   2) Chart these observations and discuss them. Answer the question of why these things occur.

   3) Have the children plan preventative measures.

4. Discuss the difference between weather and climate.

LANGUAGE ARTS

d. Play some music to set the right mood. A selection from Jack de Mello (without words) would be ideal.

e. Have the children write their legends. Illustrate the legends in art.

f. Encourage each child to share his/her legend with the class using his/her diorama: (See art lesson #1.)

2. Read the following legend to the children: Buffet, Guy. Adventures of Kamapua'a.

   a. Discuss the location of the legend and the geographical features described.

   b. Talk about the power of Kamapua'a and his ability to change into different forms.

      1) Plant forms: olomea, kukui, hala, kūkaepua'a, 'ama'u, 'uhaloa

      2) Clouds

      3) Man

      4) Fish: humuhumunukunukuapua'a

HEALTH/FOOD AND NUTRITION

MUSIC

'ili'ili. "Ke Ānuenue"
Source: Māhoe. E Hīmeni Hawai'i Kākou, p. 81.
LP Mele Hula, Noelani Records.

a. Every child should have two pairs of 'ili'ili.

b. Teach the children to hold the 'ili'ili by placing one between the thumb and index finger and the other on the fatty part of the other three fingers.

c. Have the children ho'oma'ama'a (practice) with one pair in the right hand first, then repeat the same procedure using only the left hand.

d. After the children can use the 'ili'ili comfortably with each hand, have them practice using both hands. Children will drop the 'ili'ili, but encourage them to practice.

e. Use the ipu or an 'ukulele. Have the children ho'oma'ama'a (practice) doing a kāholo (vamp) with the 'ili'ili. There are several ways of doing a kāholo with the 'ili'ili.

ART

legends.

2. Petroglyphs (cf. Filmstrip Ki'i Pōhaku). See: Appendix Unit I- I/J pp. 37-39.

   a. Run off copies of the narration and the illustrations. Have the children share their experiences with petroglyphs.

   b. Talk about

      1) The location of petroglyphs

      2) Why people carved these pictures into rocks

      3) The kinds of rocks on which petroglyphs are found

      4) The culture that can be learned from the petroglyphs

      5) The tools they used

   c. Spend some time having the children give their interpretations of some petroglyph forms.

GAMES AND RECREATION

b. The following games are simple and use 'ili'ili (pebbles) found in the environment. Have the children collect some 'ili'ili a few days early and start a class collection. For simple indoor games:

   1) Kimo (jackstones), p. 60
   2) No'a (finding a pebble under a kapa), p. 56
   3) Pūhenehene (finding a pebble on a person), p. 58
   4) Kōnane (checkers), pp. 62-63

3. Outdoor sports using pōhaku called 'ulumaika - See: Mitchell. Hawaiian Games for Today, pp. 28-30.

   a. Talk about the variety of uses of stones and rocks found in the environment.

   b. Encourage the children to create a game for a child living in early Hawai'i using only the rocks in the environment.

   c. Show the children the rock ('ulu) used in the game. Have them hypothesize what kind of game this is judging by the shape of the rock. Write their hypotheses on a chart.

      Ask:

      1) What is this 'ulu used for? Have them hypothesize and perhaps create a new game in the process.

      2) Who played this game?

      3) Why did they play this game?

4. Have the children correct their hypotheses based on their reading of the Mitchell reference cited above.

5. Teach them the game.

SCIENCE

a. Have the children predict what they feel are the differences. Write their predictions on a chart.

b. Encourage them to ask questions about the climatic factors of wind, temperature, rainfall, and location.

c. Conduct research on these factors.

Sources:

Hawai'i's Cultural Heritage - "Natural Environment" plates 14, 18. Available in 7th grade social studies departments.

Dunford: The Hawaiians of Old, pp. 15, 58, 85, 131.

Call a guest speaker from the National Oceanic and Atmospheric Administration (NOAA) to discuss concerns dealing with the effects of the tradewinds and the ocean surrounding the islands. Call 546-8620 (O'ahu) for information.

Culmination

Set up a large bulletin board display consisting of pictures, photographs, and research narration on climate, weather and the effects of erosion. Invite other classes to the presentation.

LANGUAGE ARTS

c. Talk about how he became the Hawaiians' explanation for geographical features on the windward side.

3. Letter writing

a. Have the children write a letter to their representative or to the mayor or to the community leaders. Inform them about the erosion problems in the community.

b. Invite them to come to the class to discuss the problem.

4. Have students write to schools along the windward and/or leeward areas of their island or to schools of another island to exchange data on rainfall, wind and other weather conditions. Compare the information with the data gathered about their own area.

5. After Activity 4, p. 27 of Early Hawaiian Life, encourage the children to learn the place names in Hawaiian and their meanings:

a. Islands
b. Home town or district
c. Street you live on
d. Mountain ranges
e. Rivers or streams or harbors

See: Pūku'i and Elbert. Place Names of Hawai'i. Nā Ki'i Ho'ona'auao for 17" x 22" illustrations of each island, main cities, main mountains, official color and lei.

HEALTH/FOOD AND NUTRITION

Discuss how Hawai'i's location was a major factor in keeping the people healthy in early Hawai'i.

1. Have the children formulate predictions. Sample answers:
   - Isolated from other people so they remained free of diseases
   - Ate nutritious food
   - Lived a healthful, vigorous, outdoors lifestyle
   - Practiced cleanliness

2. Compare the kinds of foods the children of early Hawai'i ate with those eaten today. Compare cleanliness today with that of early Hawai'i. Set up a comparative chart.

3. Discuss why Hawai'i is becoming popular as an ideal place for persons to spend their retirement years.

   a. Mild, pleasant climate free from smog and extremes of heat and cold

   b. Relaxed, informal way of life

   c. Absence of heating fuel costs and seasonal clothing requirements

4. Explain how the open-air living in Hawai'i contributed to the health and well being of its people.

5. Compare this kind of open-air living with the air-conditioned type living we have in Hawai'i today.

MUSIC

See: Appendix Unit I-N, pp. 44-45.

f. Teach the song using the translation in E Hīmeni Hawai'i Kākou and have the children create the motions using the 'ili'ili.

g. Explain the importance of chants.

   1) Have them listen to a variety of chants that describe the natural environment.

   2) Encourage them to describe their feelings about the chants.

   3) Ask them to predict what roles chants played in early Hawai'i.

h. Have the children listen to instrumental Hawaiian music and identify the instruments. Discuss the introduction of foreign instruments and how they influenced the music of early Hawai'i.

ART

d. Allow them to select one that they would like to reproduce.

e. Make rubbings of petroglyphs. The rubbings can be framed and hung or can be used on skirts or other articles of clothing. You will need a piece of unbleached muslin or other soft cloth and crayons. Place the cloth over the petroglyph and color within the figure, or to get another effect, you can color the area outside of the figure with your crayon.

   If you are not able to visit an area which has petroglyphs, you can create the same effect by doing the following:

   1) Draw a petroglyph design on your cloth lightly with the crayon

   2) Lay the cloth on a rough concrete walkway

ART

   3) Firmly color inside or outside of the figure

f. Sand petroglyphs

   Materials needed:

   Pieces of wood about 6"x8", 1 per child;
   Elmer's glue;
   Green, black, or white sand;
   Liquid plastic spray.

   Procedures:

   1) Have the children draw their petroglyph on the block of wood.

   2) Outline the petroglyph figure with Elmer's glue.

   3) Sprinkle black sand on the figure. Let dry for two days.

   4) Spread glue on the rest of the board and sprinkle the entire area with white sand. Shake the excess off.

   5) Green sand may be used in place of black sand.

ART

Resources:

Aloha Council, Boy Scouts of America. Hawaiiana, a Handbook for Scouts.

Cox, J. Halley and Stasack, Edward. Hawaiian Petroglyphs.

Hazama, D. (Ed.). Culture Studies: Hawaiian Studies Project. pp. 70-73.

McBride, L.R. Petroglyphs of Hawai'i.

The following lessons should be used in conjunction with the social studies lessons found in Early Hawaiian Life, pp. 29-31,

Grade 4, Unit I "Formation of the Islands"

SCIENCE

- Science activities to study the basic geologic formation of high volcanic islands such as the Hawaiian Islands and other Polynesian islands.

Materials needed: Appendices Unit I - A and B, pp. 26-27. Make transparencies to be used in the instruction. Table display: Arrange on a table a variety of lava rocks (e.g., 'a'ā, pāhoehoe), olivine rocks and Pele's tears (whatever by-products you have available from volcanic eruptions).

1. Sharing a film: "The Hawaiian Islands: Their Origin and Nature", #1170, 10 minutes.

   a. Introduce film using inquiry:

      1) Pass the rocks around and have the children examine them.

      2) Ask: Where do you suppose these objects came from? How does a volcano erupt? What causes an eruption?

      3) Write their predictions on a chart.

   b. Show the film.

   c. Discussion following the film:

      1) Have the children recall the stages involved in the formation of an island.

      2) Have them go to the blackboard

LANGUAGE ARTS

- The following activities in language arts can be used with the science lessons on geologic formation.

1. Word association: Write the word "volcano" on the board. Have the children give as many word associations as they can. Write these words down on a chart as shown below. Ask your kupuna to conduct a lesson on the Hawaiian word for each of the important terms or use Appendix Unit I-C, p. 28.

Volcano

English	Hawaiian
erupts	lua'i pele
ash	lehu
explosion	halulu
volcanic ejecta	pōhāhā

Have them pretend they are living on an island with an active volcano. Using some of the words listed on the chart, have them write an account of what happened on "The Day the Volcano Erupted in My Backyard."

2. Sharing: Share the stories written. Have each child illustrate one important incident in the story to go along with his/her story. (Illustration can be done in art. See Art lesson #2 on p. 15.)

3. Sharing legends: Read a few excerpts from the Pele epic, Pele and Hi'iaka,

HEALTH/FOOD AND NUTRITION

6. Discuss the way the new buildings are built today with no open-type windows, just glass. With the energy crisis we have today, what should the architects have done to improve the situation?

MUSIC

- Songs and chants about the islands and their formation.

1. Singing the songs of the islands. Sources: Kamehameha Schools. Explorations/Ho'omāka'ika'i. Māhoe. E Hīmeni Hawai'i Kākou.
    a. Procedure
        1) Talk about each island's lei or flower and color.
        2) Encourage the children to bring the island flowers to school.
        3) Learn the Hawaiian words for the island colors.
    b. See Nā Ki'i Ho'ona'auao for poster maps of each island containing all the information for this lesson.
    c. 'Ukulele instruction - Teach the children the 'ukulele and autoharp accompaniment to the island songs.

ART

- Creative activities to enrich the study of the geologic formation of the islands

1. Creative sculpturing - Divide the class into four groups. Each group will sculpture one of the following out of papier mâché:

    Group 1 - Volcano
    Group 2 - An island
    Group 3 - Pele
    Group 4 - Will provide the houses, trees and other scenario. Prepare the ahupua'a for a volcanic eruption. See: Early Hawaiian Life, p. 30 for science demonstration.)

2. Collage (illustration for "The Day the Volcano Erupted in My Backyard") See: language arts plans, p. 14.
    a. Materials needed:

        Oaktag 12" x 18"
        Collection of materials to use: black sand, pumice, soil, scrap material, paints, brushes, glue, yarn, etc.

    b. Encourage the children

GAMES AND RECREATION

- Creative dance (hula) movements can be used to interpret the songs and chants learned in music. See: Appendix Unit I-E, pp. 31-33.

1. Talk about dancing in early Hawai'i.
    a. Who did the dancing? (men? women?)
    b. What was it called? (hula)
    c. Why did they dance? (creative expression - accept all appropriate contributions)
    d. Have you seen so-called ancient Hawaiian dancing (hula kahiko)?
    e. What did they wear?
    f. What instruments did they use?
2. Compare the early Hawaiian hula with the dances of ancestors of children of various ethnic backgrounds represented in your classroom such as:
    a. Japanese
    b. Filipino
    c. Chinese
    d. Korean
    e. European
    f. Early American
    g. African
    h. Vietnamese
    i. Samoan
3. Have the children create motions for the island songs learned in activity #1 in music class. Community resource persons may be used to demonstrate standard hula motions. Encourage them to use their hands, arms, facial expressions and even foot movements to express themselves. See: Appendix Unit I-K, pp. 40-41.
4. Have children in the classroom share some of the dances from their own cultural backgrounds.
    a. They may respond to records from their own cultural backgrounds.

SCIENCE

to diagram these stages.

2. Display transparency made from Appendix Unit I-A, p. 26 on the overhead projector.
   a. Discuss the stages as shown and introduce the new vocabulary to them.
   b. Have the children compare the diagrams they sketched on the board with the transparency.
   c. Encourage the children to ask questions about the transparency. Record the questions on a chart as a record of what they need to research.
      1) What causes a volcano to erupt?
      2) How long did it take for an island to finally appear above the surface of the ocean?
      3) What is magma?
      4) How do scientists predict when a volcano is going to erupt?
      5) What is a fringing reef?
      6) How does coral grow?

LANGUAGE ARTS

by Emerson and the section on Rev. William Ellis' 1823 trip to Kīlauea volcano, chapter X, Polynesian Researches: Hawai'i. See: Appendix Unit I-D, pp. 29-30 for a Pele legend rewritten with Hawaiian words inserted to build up vocabulary. (Perhaps a kupuna could be used in this activity.) Encourage the children to read Pele legends on their own.

3. Compare the Pele legends with the scientific explanation of secondary volcanism.
4. Share Maui legends. Read the Maui legend about how the Hawaiian Islands came to be. Encourage the children to think about their own legends of origin.
5. Creative writing - Have the children imagine their own legends of origin of natural phenomena.
   a. Have them think about some natural phenomena in Hawai'i today, e.g., rain, thunder, mountains, fire, lightning, winds, waterfalls, ocean currents, volcanic eruption.
   b. Discuss how these phenomena occur and predict how the children of early Hawai'i might have interpreted these happenings.
   c. Motivate them to include many of these phenomena in their writing.

HEALTH/FOOD AND NUTRITION

Music

2. Chant: "E Pele, E Pele"
   See: Appendix Unit I-D, p. 46.

   a. Talk about Pele's role in early Hawai'i:

      1) Who is she?

      2) Where does she live?

      3) Why is she important to the Hawaiian people?

      4) What kinds of things does she do? E.g., erupts, flows.

   b. Introduce the chant using a chart.
      See: Appendix Unit I-M, p. 43.

      1) Go over the words. Have the children pick out those words that are familiar to them.

      2) Talk about the meaning of the verse.

      3) Chant the first verse for them.

      4) Teach the chant, one line at a time. Pro-

Art

to pick one event from their stories written in language arts to illustrate.

c. Discuss the following points they should consider as part of their illustration:

   1) Location of the volcano in relation to the kauhale.

   2) Number of people in the story.

   3) Plants and animals in the kauhale.

   4) Location of the kauhale in the ahupua'a.

d. Have them do a rough sketch on manila or drawing paper.

e. Encourage the use of at least five things in their collages.

f. Encourage the children to practice

   laulima (cooperation)

   kōkua (help)
   and other 'ohana values.

Games and Recreation

b. Have them bring their grandparents or parents who know the dances. Use them as resource persons to instruct the children on the ethnic dances. (The state libraries have cultural kits that can be borrowed. These kits consist of artifacts and clothing of a variety of ethnic groups.)

c. Compare the dance movements of these various ethnic groups with those of the early Hawaiians.

5. Hula kahiko - "E Pele, E Pele"

   a. Have the children think about the chant as they learned it in music, activity #2 on this page. Encourage them to react to the chant using their feet.

   b. Teach the children the hela step. See: Appendix Unit I-K, p. 40. Have them practice this step with the record or tape.

   c. Have them think about the meaning of the words. Starting with verse #1, have them create hand motions for this chant.

   d. Combine the hand motions with the foot work (hela).

6. "Aia Lā 'O Pele"

   a. Use the same procedure as above to create motions for this chant.

   b. Teach the children the kāwelu step for this dance.
      See: Appendix Unit I-K, p. 41.

SCIENCE

7) What causes the submergence of the volcanic island?

8) What is an atoll?

d. Have the children plan with you the best way to do research in order to answer their questions.

References:

Dunford. The Hawaiians of Old, pp. 1-6.

Potter and Kasdon. Hawai'i our Island State, pp. 17-22.

McBride. About Hawai'i's Volcanoes. Excellent resource to use for total class research on volcanism.

OIS. Coral: A Hawaiian Resource

e. Have the children present their research reports using illustrations, pictures from magazines or pamphlets or books.

3. Involve the children in a further study of the Hawaiian archipelago and its location in the Pacific.

Use the science program guide, Science In Hawai'i: A Fourth Grade ETV Guide to conduct a unit using the video program, "Hawai'i and Planet Earth: The Hawaiian Geography." This program is available

LANGUAGE ARTS

d. Have them write their stories in the first person.

See: Appendix Unit I-H, p. 36 for Hawaiian vocabulary that can be used in their stories.

HEALTH/FOOD AND NUTRITION

MUSIC

nounce the words for them and have them follow you.

5) After they have learned all the verses, have them create dance motions for it. (See: games and recreation activity #5, p. 17.)

c. Have the children think of other things Pele does and compose new verses for the chant. (Use the kupuna in your class to help translate these new verses into Hawaiian.)

3. Chant: "Aia Lā 'O Pele"

See: Appendix Unit I-L, p. 42.

Other sources:

Mele Hula, LP, Noelani Records, NRS102
Mele Inoa, LP, Poki Records

(Use the same procedure as mentioned above to teach this chant.)

4. Music appreciation

Source: Ha'aku'i Pele i Hawai'i, LP, Hula Records, Edith Kanaka'ole. Read the translation of "Kua Loloa Kea'au" one of the chants for Pele.

ART

3. Papier mâché or other sculpturing media

   a. Construct a model of the Hawaiian archipelago showing topographical features.

   b. A good dough can be made with:

      1 cup flour
      2 cups salt
      1 cup water.

4. Filmstrip (See science lesson - closure, p. 20)

   a. Have the children work in groups. After planning steps to include in the filmstrip, have them sketch their pictures on paper cut in long pictures,

   b. Each picture should be about 4" x 6". If they are doing 15 strips, they should have a strip 60" long. Use crayons or felt pens for this activity.

   c. Encourage the children to fill up the entire space, leaving no blank white spaces.

GAMES AND RECREATION

SCIENCE

from Multimedia Services, Educational Television Section (988-2117). Requests should be made on the Videotape Program Request form to be found in any year's edition of the ETV programming schedule, Television for Learning.

Check the ETV schedule for broadcast dates for this program in case they are convenient for your planned lesson timeframe.

Complete pre- and post-televiewing activities are available in the Science In Hawai'i guide. After the students have viewed the film, ask the school kupuna to kōkua with the proper pronunciation of the Hawaiian terms, especially of such words as 'a'ā and pāhoehoe which have been taken into English scientific vocabulary with incorrect Hawaiian stress and pronunciation elements.

SCIENCE

Closure

Plan production of a movieroll art project with drawings showing the formation of the Hawaiian archipelago over the passing of centuries. Some groups can work on the volcanic phase when the islands were built up, others on the stage of maximum buildup, others on erosion and subsidence and still others on the present aspect of the islands, atolls, fringing reefs and other physical features in the entire archipelago, including the vast northwestern area of the chain. Conduct the actual art activity in art class.

MUSIC

Explain that this is a hula 'āla'apapa, ancient dramatic hula. Play "Noho Ana i Hilo" to set the mood for the children.

a. Have the chidren imagine being in Puna on the island of Hawai'i as Pele vents her wrath by ravaging Puna with fire and lava.

b. Discuss:

   1) How you felt as you listened to the chant

   2) What instruments were being used

   3) What you could hear in the background

   4) How Pele must have felt as the lava flowed towards Puna

   5) How Hi'iaka must have felt when Pele destroyed her lehua grove

c. Activity: encourage children to create hula rhythms using other Hawaiian instruments as an accompaniment as they listen to the record again.

ART

d. Look for opportunities to encourage laulima (cooperation), kōkua (help), alu like (working together), and other 'ohana concepts.

GAMES AND RECREATION

SCIENCE

- Activities to study the coral reefs of Hawai'i.
  1. Plan a trip to see a coral reef. Walk on the reef and study the plant and animal life there. Encourage the children to investigate and inquire about the life on the reef. Have them make inferences. Record their questions on a chart and plan research activities.
  2. See Science in Hawai'i (RS080-9290) for a study lesson on "Life on the Sandy Shore and the Rocky Shore." This video lesson takes the children to a sandy and to a rocky area to study the plant and animal life there. It contains pre- and post- activities for the viewing.
     - a. Discuss the ecology of a Hawaiian reef.
     - b. Identify the shore creatures and find more information about their habits and habitats.
     - c. Experiment to see what kinds of environmental changes destroy them.
     - d. Have the children select one animal or plant to study in detail, especially the coral, eel, crab, shrimp or any of the fish that live in and on a coral reef.
     - e. Have them write a brief report to share with the class.

LANGUAGE ARTS

- Creative writing using the study of the coral reefs of Hawai'i.
  1. Have the chidren write about an imaginary trip aboard a glass bottom boat as it glides over a reef and lingers there. Have them describe as many animals and plants as they can see.
  2. Encourage the children to discuss the changes that are taking place on Hawai'i, the Big Island, due to volcanic eruptions.
     - a. Have them think about what might happen along the Hawaiian chain 500,000-1,000,000 years from now.
     - b. Encourage them to jot down their ideas.
     - c. Have them pretend they are taking a trip into the future in a floating balloon.
     - d. Have them write a description of the archipelago and all the changes that have taken place.
  3. Reference skills
     - a. Plan with the school librarian simple lessons on doing research. Lessons are available in the Library Skills Guide for teachers and librarians. Teach the children ncecessary skills in doing research. E.g.,

HEALTH/FOOD AND NUTRITION

- Nutritional value of foods from the coral reefs of Hawai'i.
  1. Develop a chart to show which food products harvested from the reefs provide the nutrients (the necessary vitamins, minerals, etc.) that are needed to develop strong, healthy people.

PROTEIN	VITAMIN	MINERAL
Fish	Fish	Fish
Shellfish		
	Limu	Limu

  2. Discuss the risks involved in diving for coral or in collecting rocks and minerals.
  3. Learn rules on Water Safety. Students can make posters for each rule on water safety to display in the classroom or in other parts of the school.
  4. Participate in the 4th grade drownproofing state program wherein each child is taught survival in the water.

MUSIC

- Songs about the coral reefs of Hawai'i.

1. "Ku'u Pūpū Kau Pōhaku"

   Source: Māhoe. *E Hīmeni Hawai'i Kākou*, pp. 86-87.

   a. Write the words on a song chart, in English as well as Hawaiian.

   b. Have the children look at the Hawaiian words as you read the English translation.

   c. Ask:

      1) What shell do you suppose the composer is thinking about?

      2) What is the Hawaiian word for shell? (*pūpū*)

      3) Do you see any words on the chart that are familiar to you? E.g.,

         pōhaku (rock)
         ha'ina mai ka puana (tell the refrain)
         nani (pretty)
         'oe (you), etc.

ART

- A creative three dimensional art activity for the coral reef unit.

1. After a trip to see a coral reef and to see the animals that live there, have the children choose one favorite reef animal.
2. Plan a mural of a coral reef. Plan the scene so that the animals and plants are drawn to scale.
3. Have the children stuff their animals by drawing the animal, cutting two of the same animal, stapling the edges and stuffing them.
4. Use paint for the background scene and encourage imaginative use of other materials from the ocean to set up the ocean scene. E.g., use sand, *limu*, dried shells, and other materials found on a reef.

GAMES AND RECREATION

SCIENCE	LANGUAGE ARTS	HEALTH/FOOD AND NUTRITION
Closure - see art lesson "3 Dimensional Art", p. 23. DOE Films: "Coral Jungle" 5681 "Coral Reefs" 4148 "Great Barrier Reef" 5728 Other Resources: OIS: Coral: A Hawaiian Resource Science in Hawai'i "War and Peace on the Coral Reef"	a. Locating reference books and other materials b. Using the reference books properly by locating the index and finding the proper pages.	

MUSIC

4) Teach new, key Hawaiian words, e.g.,

   ho'ohihi (admire)
   mai (come)
   hinuhinu (shiny)

5) Pronounce the words for the children and have them repeat them.

6) Sing the first verse for them.

7) Teach as many verses as they are able to learn.

d. Creative interpretation

   Using the song mentioned earlier, encourage the children to choreograph motions for each verse.

e. Instrumentation

   Teach the children the accompaniment on the 'ukulele.

2. Song: "'Ōpae E"

   See: Appendix Unit I-F, p.34.

   a. Talk about some of the reef animals the children have been studying in science.

   b. Name the particular animals in the song

      1) Shrimp
      2) Mollusks
      3) Snail
      4) Shellfish
      5) Limpet

   c. Have available pictures of these animals or of their shells.

   d. Share the legend with the chidren.

   e. Go over the words in the first verse and see how many Hawaiian words are already in the children's vocabulary.

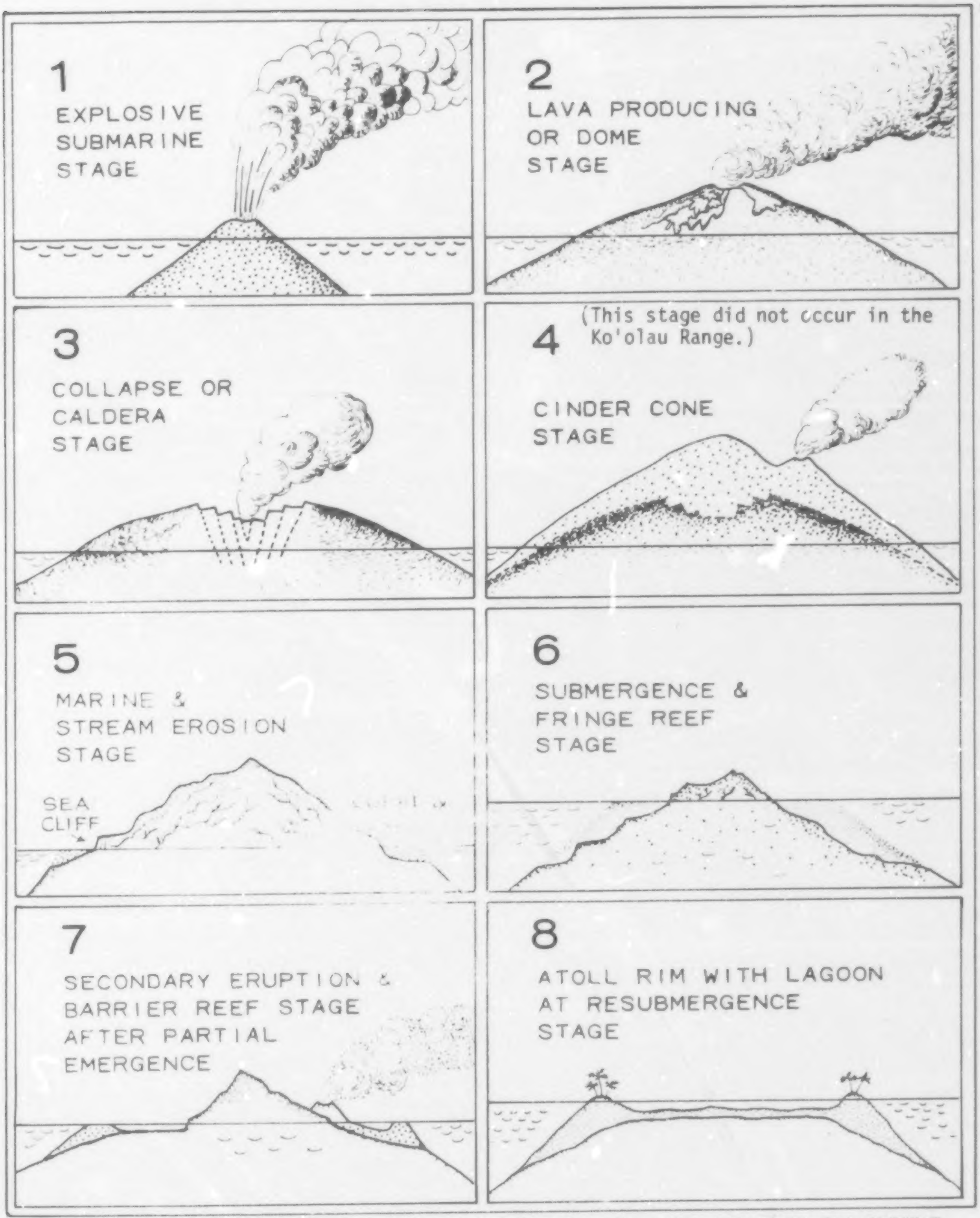
   f. Due to the repetition of words in the song, the children will be able to learn the verses readily.

   g. Create motions for this song in Games and Recreation.

   h. Use the 'ukulele as an accompaniment.

GAMES AND RECREATION

7. Creative hula - "'Ōpae E". After learning the song in music, activity #2, talk about the possibility of dramatizing the song. Have the children create a pantomime for the song. A combination of singing, dancing, and dramatizing is possible.

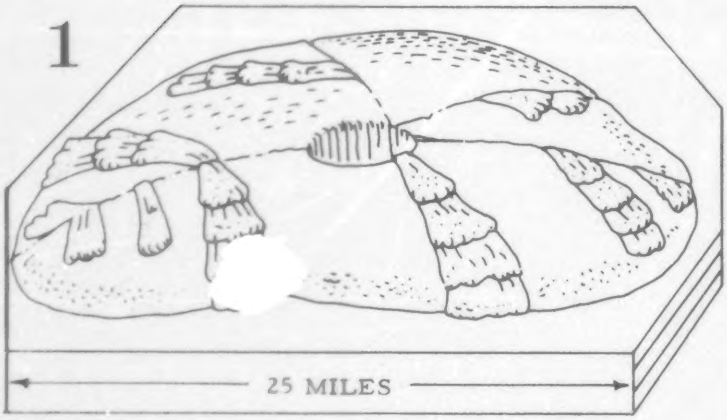

1
EXPLOSIVE SUBMARINE STAGE
2
LAVA PRODUCING OR DOME STAGE
3
COLLAPSE OR CALDERA STAGE
4
(This stage did not occur in the Ko'olau Range.)
CINDER CONE STAGE
5
MARINE & STREAM EROSION STAGE
SEA CLIFF
6
SUBMERGENCE & FRINGE REEF STAGE
7
SECONDARY ERUPTION & BARRIER REEF STAGE AFTER PARTIAL EMERGENCE
8
ATOLL RIM WITH LAGOON AT RESUBMERGENCE STAGE

A GEOLOGIC HISTORY OF A VOLCANIC ISLAND IN THE PACIFIC

AFTER H.T. STEARNS, GEOLOGY OF HAWAII, T.H. BULLETIN 8, 1946

Effects of EROSION

1



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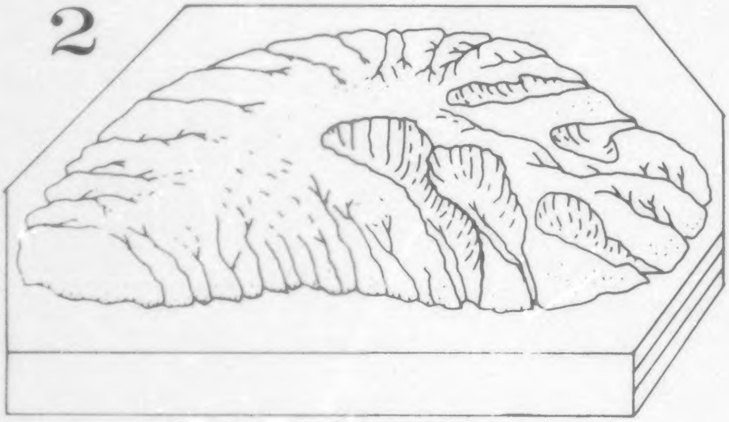

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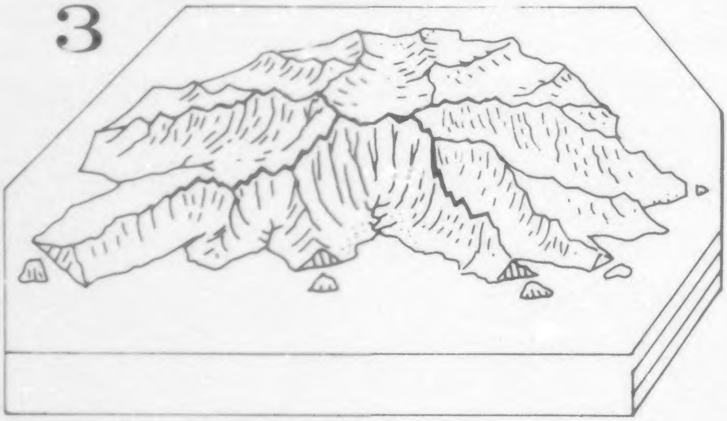


THE HAWAIIAN LAVA OR SHIELD VOLCANO

STAGE 1 SHOWS 4° OR 5° GENTLE SLOPE, OFTEN FLAT NEAR TOP.

RANGE UP TO OVER 13,000 FEET ABOVE SEA LEVEL.

IN WIDTH (AT SEA LEVEL) 10-50 MILES, AT SUBMERGED BASE: UP TO 100 MILES.

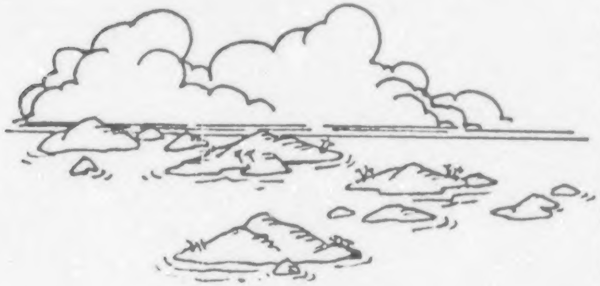
CENTRAL DEPRESSION AND LAVA FLOWING FROM RADIAL FISSURE LINES.

2. YOUNG STAGE - DEVELOPMENT OF AMPHITHEATRE-HEADED VALLEYS.

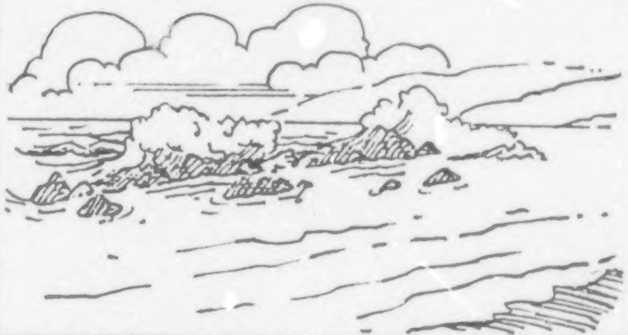
3. MATURE STAGE - RESULTS OF GREAT STREAM EROSION.

HAWAIIAN TERMS FOR ISLAND FORMATION

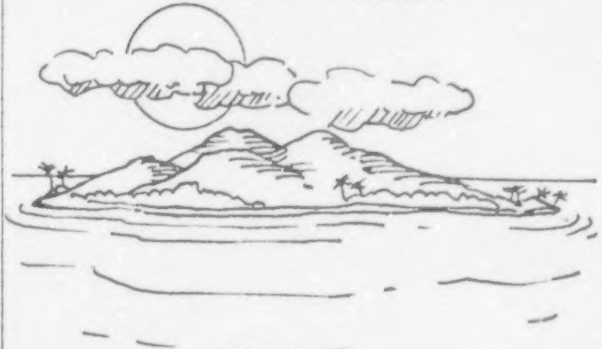
Archipelago - Pae'āina



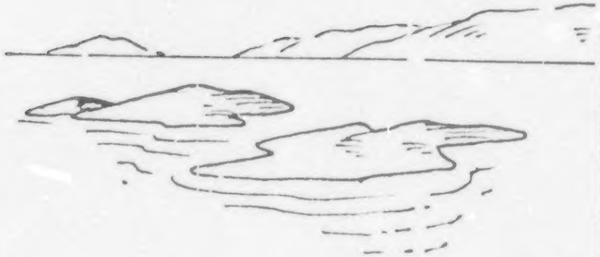
Reef - Papa



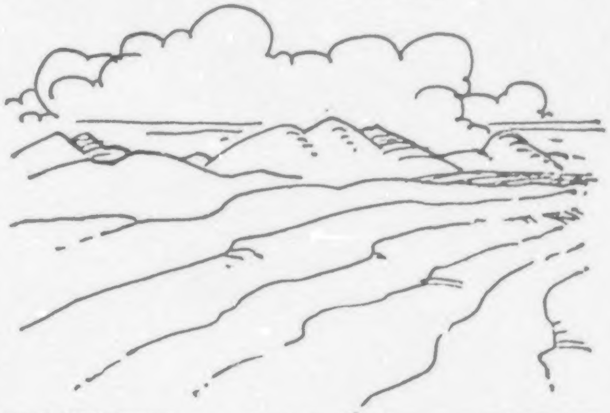
Island - Mokupuni



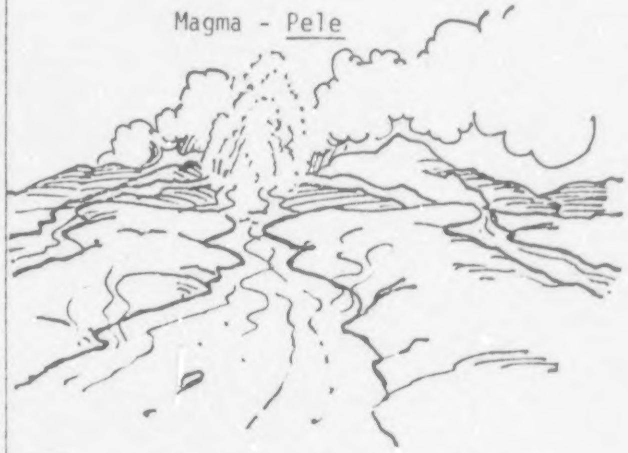
Shoal - Hāpapa



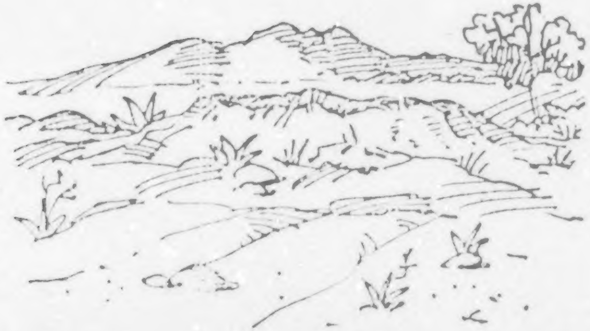
Lava - 'A'ā Pāhoehoe



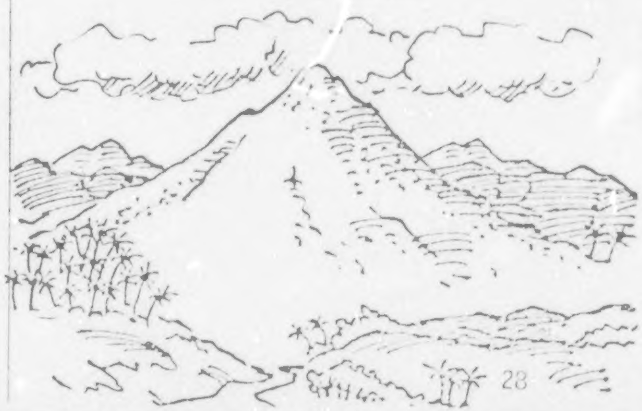
Magma - Pele



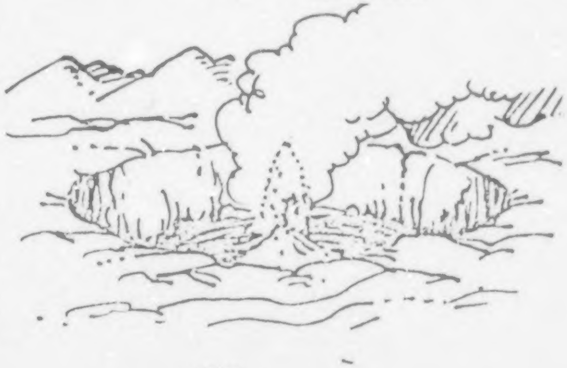
Dormant - Moe



Summit - Nu'u



Volcano - Lua Pele



"HOW HAWAI'I WAS DIVIDED"

Sample of Re-telling Story

by Noelani Māhoe

Pele watched her fires while seated about her, her kaikaina (younger sisters) made lei of lehua. "Look," one whispered. "He kanaka u'i." (A handsome man.)

He kanaka u'i (a handsome man), indeed, stood on the point of rock above the edge of the pit. He smiled down at the wāhine (women). The kaikaina (sisters) were delighted. "Look Pele," they whispered again. "See that kanaka u'i. Let us invite him to come down. Let us put our lei around his neck."

"Kanaka u'i," said Pele scornfully. "He pua'a kēlā." (That is a pig.) It is Kamapua'a the pua'a.

"Oh no, you are mistaken," the kaikaina told her. "You have not looked at him. We know pua'a. We have seen them often in the lowland. We know the shape of a pua'a, the po'o (head) of a pua'a, the nuku (snout) of a pua'a. This is no pua'a, we tell you. Look, Pele, look! He kanaka u'i."

"Oh, I know you!" Pele answered. "Pua'a with a long snout! Pua'a with a wagging tail. I recognize you."

The kanaka u'i was indeed Kamapua'a, the pig god. Pele's true words angered him and he began to taunt her.

As he taunted her, Pele, too, was angered. "Stir up my fires!" she commanded her kaikunāne (brothers). "Let this pua'a feel the ua 'ele'ele (black rain) and hot lava. We shall drive him from this island. Hawai'i is ours. Let the pua'a return to O'ahu."

The fires blazed in the pit and hot lava overflowed. Dark clouds gathered, lightning shot from cloud to cloud and thunder roared. The earth shook. Pele could no longer see Kamapua'a, but she heard his scornful voice taunting her.

Her eyes blazed with anger. She stamped her foot on the floor of the lava pit and lava burst forth filling the pit. Hot rocks shot up steam and smoke rose filling the air. Kamapua'a must be burned she thought to herself. "Let the fires die down!" she commanded her kaikunāne. When the smoke had disappeared and the sky became clear, there stood Kamapua'a on the same point of rock. When he saw her looking up at him, he began to taunt her again.

Pele was furious. She stamped her foot again and ordered her kaikunāne to rekindle her fires. The lava burst forth overflowing the pit. Kamapua'a, seeing that the lava was overflowing the pit, changed himself into his pua'a form. As he ran down the mountain side, the hair on his back was singed by sparks of the fire and to this day, pua'a have bristles.

Pele seeing Kamapua'a in his pig form got angrier. She stamped her foot again, and the lava flowed down faster. In Kamapua'a's excitement,droppings fell, and a weedy shrub called kūkaepua'a sprang up.

When Kamapua'a reached the ocean, he jumped in the sea and changed himself into his fish form, humuhumunukunukuapua'a. Pele seeing all of this realized that neither of them could destroy the other. Her kaikunāne and kaikaina urged her to make peace with Kamapua'a or the island would be laid to waste. Pele did this declaring that the windward side would belong to Kamapua'a and the other side to her.

VOCABULARY

kaikaina - younger sister(s) of female; younger brother(s) of male

he kanaka u'i - a handsome man

wāhine - women

he pua'a kēlā - that is a pig

pua'a - pig

Kamapua'a - pig god

kaikunāne - brother of female

ua 'ele'ele - black rain

kūkaepua'a - small weedy, creeping grass (Digitaria pruriens) native to Hawai'i.

humuhumunukunukuapua'a - fish varieties of humuhumu (Rhinecanthus aculeatus, R rectangulus) Lit. humuhumu with a snout like a pig.

Source: Pūku'i, Mary and Curtis, Caroline. Pīkoi.

HULA

Hula is the Hawaiian dance that tells a story through a mele (chant or song) and appropriate gestures. The story may be one that honors a god, goddess, or an ali'i, a royal person. It may be a story about a place or a thing.

According to the oldest mele, the goddess Hōpoe was the first kumu hula or teacher of the hula. Hōpoe's first student was Hi'iaka-i-ka-poli-o-Pele. This was Pele's youngest and favorite sister, Hi'iaka. Today, the chants for Pele are commemorated in the name of Hi'iaka.

In old Hawai'i, to become a dancer meant a long and strict course of training under a kumu hula (dance teacher). The haumāna were taught in the hālau hula or dance school. A kuahu (altar) was built inside the hālau. The haumāna placed gifts of lei on the altar. They chanted greetings and praises to Laka, goddess of the hula.

At the end of the training period, a graduation or 'uniki was held. After the ceremony, the dancers were ready to perform before the ali'i and the people.

Today, the altar is no longer built inside the hālau. However, the haumāna hula are taught to make and bring beautiful lei to their classes. They learn the chants of Laka to show respect for the teachings of old. Some kumu hula offer a long and strict course of training which ends with an 'uniki.

The vocabulary for directionals used in hula are:

huli	- turn	ma uka	- toward the mountain
i luna	- upward	ma kai	- toward the sea
i lalo	- downward	'ākau	- right
i mua	- forward	hema	- left
i hope	- backward	'ami	- round hip movement

Ho'omāka'ika'i/Explorations 1981. Reprinted with the permission of
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The words in the verses below can be expressed by the use of basic hula motions.

Here I am
A child of this land called Hawai'i
There is beauty everywhere.

Mountains stand tall and majestic
Almost reaching the heavens above
Waterfalls run gently down the slopes
Falling into cool ponds below.

It is here that I spend time swimming and thinking
And day dreaming about what it must have been like
a long, long time ago.

I see beautiful trees
So tall and strong like soldiers ready for battle
There's a softness in the swaying of the leaves
As the wind blows gently through the branches.

I see the beauty of the ocean
Its waves of blues and greens
Extending as far as the horizon.

In the calm seas I see canoes
Racing towards the shore
To this land so dear to my heart.

This land called Hawai'i!

(composed by Nu'ulani Atkins)

The hula has become a form of entertainment for all the people. Both men and women dance. They perform in either a sitting or a standing position.

A standing dancer or *'ōlapa* is usually accompanied by a seated chanter-drummer or *ho'opa'a*. The chanter-drummer beats the *ipu hula* or gourd drum for some dances. For other dances the *pahu* or wooden skin-head drum is used.

A seated dancer usually does his/her own chanting. At the same time, the dancer accompanies himself/herself with a certain *hula* instrument such as *pū'ili* (split bamboo), *'ili'ili* (small, water worn rocks), *'ulī'ulī* (feathered gourd), or *kāla'au* (rhythm sticks).

Dancers begin and end each *hula* with a call or *kāhea*. The *kāhea* at the beginning is either the title or the first line of the chant or *mele*. The *kāhea* at the end is the dedication to the place, thing, or person for whom the *mele* is composed.

There is a basic vocabulary of hand gestures. The dancer depicts the world around him/her as it is seen in relation to the *'ōlapa*. For example, the motions for the things of the sea place the hands below the waist. A flower might be shown at eye level or higher, should the blossom be on a high branch of a tree. The motions for the sun, moon, stars, and clouds are placed above the head. The gesture for rain would start high and gradually be lowered in much the same way that rain really falls.

'ŌPAE E

Traditional

According to legend, a puhi (eel) kidnapped a maiden from the village of Kahakuloa, Maui. She was the kaikuahine (sister) of one of the village boys who then called on various sea creatures to help rescue her from the eel's cave. All refused, claiming that they were too small to challenge the big eel. Finally, the little 'opihi (limpet) agreed to kōkua (help) the boy by clamping themselves tightly over the maka (eyes) of the puhi so that he could not see as the boy went in to the cave to rescue his kaikuahine.

Note: Verses 1 through 4 are identical except that the name of each new sea creature is substituted in the proper place.

1.	'Ōpae e! ('Ōpae e!)	Oh, Shrimp! (Oh, Shrimp!)
	'Ōpae ho'i! ('Ōpae ho'i!)	Indeed, you, Shrimp! (Indeed, you, Shrimp!)
	Ua hele mai au, ua hele mai au	I have come, I have come
	Na Kuahine.	For Sister.
	A ia wai? A ia Puhi!	Caught by whom? Caught by Eel!
	Nui 'o Puhi, a li'ili'i au,	Eel is big and small am I,
	'A'ole loa!	No indeed!

2.	Pipipi	Periwinkle
3.	Pūpū	Seashell
4.	Kūpe'e	Nerita shellfish

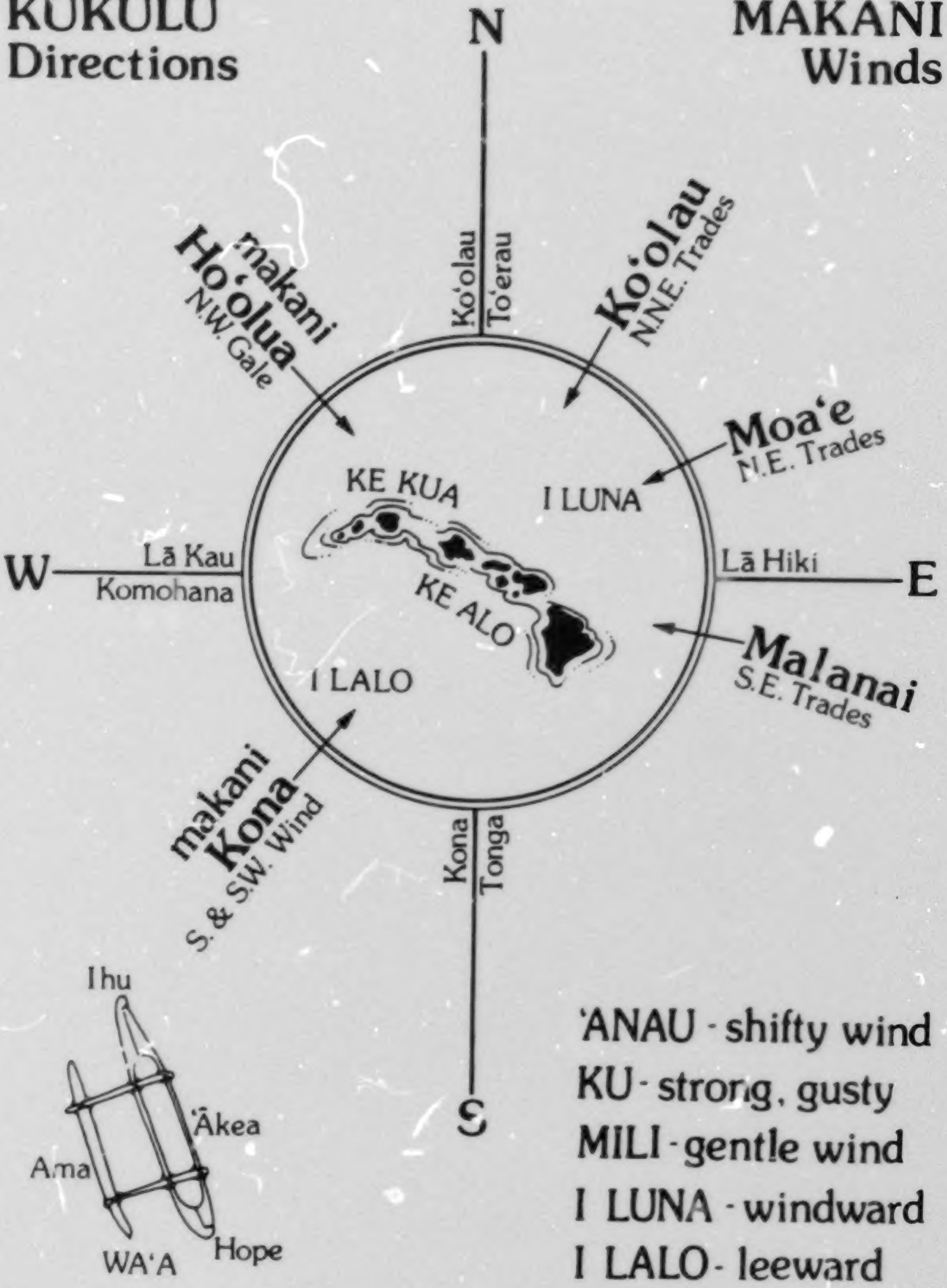
5.	'Opihi e! ('Opihi e!)	Oh, Limpet! (Oh, Limpet!)
	'Opihi ho'i! ('Opihi ho'i!)	Indeed, you, Limpet! (Indeed, you, Limpet!)
	Ua hele mai au, ua hele mai au	I have come, I have come
	Na Kuahine.	For Sister.
	Mai maka'u! Na'u e pani	Do not fear! I will close
	I ka maka a 'ike 'ole kēlā puhi!	The eyes until that eel sees nothing.

Recordings:

Hawaiian Hula Eyes, Mountain Apple Co., Brothers Cazimero
Mokulara, Banyon Records, Leon and Malia
This Is Eddie Kamae, Hula Records, Eddie Kamae and the Sons of Hawai'i

NĀ KUKULU Directions

NĀ MAKANI Winds


N
Ko'olau
To'erau
makani Ho'olua
N.W. Gale
Ko'olau
N.N.E. Trades
Moa'e
N.E. Trades
KE KUA
I LUNA
W
Lā Kau
Komohana
Lā Hiki
E
KE ALO
Malanai
S.E. Trades
I LALO
makani Kona
S. & S.W. Wind
Kona
Tonga
S
Ihu
'Ākea
Ama
Hope
WA'A

'ANAU - shifty wind
KU - strong, gusty
MILI - gentle wind
I LUNA - windward
I LALO - leeward

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NATURE VOCABULARY

Hawaiian-English

ke ahi	the fire
nā 'ale	the waves, ocean swells
ke ao	the clouds, light of day
nā au o ke kai	the ocean currents
ke one	the sand
ka ua	the rain
ka hua	the fruit
ke kahakai	the beach, seashore
ke kahawai	the stream, river
ke kai	the ocean, sea
ke kuahiwi	the mountain
ke kumulā'au	the tree
ka lā	the sun, day
ka lā'au	the tree, plant, wood
ka lau	the leaf
ka lepo	the dirt, earth, soil
ka lani	the heavens, chiefs

ka lewa	the firmament
ka lua pele	the volcano
ka lua'i pele	the volcanic eruption
ka mahina	the moon
ka makani	the wind
ka manu	the bird
ka mauna	the mountain
ka nalu	the wave, surf
ka 'ōpua	the cloud bank or billows
ka pali	the cliff
ka pele	the magma, lava
ka pō	the night
ka pōhaku	the stone, rock
ka pouli	the darkness, eclipse
nā pua	the flowers
ka pūnāwai	the spring
ka wailele	the waterfall

(Note: Ka and ke are the singular, definite articles meaning "the"; nā is the plural, definite article, also meaning "the". In general, ka is used with singular nouns with the exception of words starting with K, O, A, E which take ke. Words which begin with the 'okina (glottal stop), a consonant, before O, A or E take ka. Some few words beginning with P also take ke although the majority take ka, exceptions are indicated in the Hawaiian Dictionary.)

Petroglyphs

by Mānealani Pescaia

Petroglyphs are very simple and basic symbols that are a permanent record of some aspect of early Hawaiian life. They help historians to reconstruct early Hawaiian culture.

Petroglyphs in Hawai'i are found almost entirely on the dry sides of the islands near the seashore. They are found on five different kinds of surfaces: *pāhoehoe* lava rock, water-worn boulders, cliff faces, cave walls and sandstone beach shelves.

Sites were selected for petroglyphs because of the cultural significance of the area more so than merely the availability of the rock surfaces. It is believed that the force behind the carving of petroglyphs was the human need for visual images to record trips and events, the realistic concern about living a long life and the commemoration of events. Other speculations as to why petroglyphs were carved are:

1. It was a ritualistic act that needed to be done in order to clear a *kapu*, or to ask permission from the gods or to insure the protection of one's *'aumakua*.
2. It was a result of the traveler's desire to write his/her name on a stone in picture form.
3. It may have been a required act of a traveler as he left one *ahupua'a* to go to another.
4. One person may have carved a figure into a *pōhaku* and others seeing it, may have followed suit.
5. According to Ellis, "Self-preservation or at least personal well-being, was to be insured by the action taken."

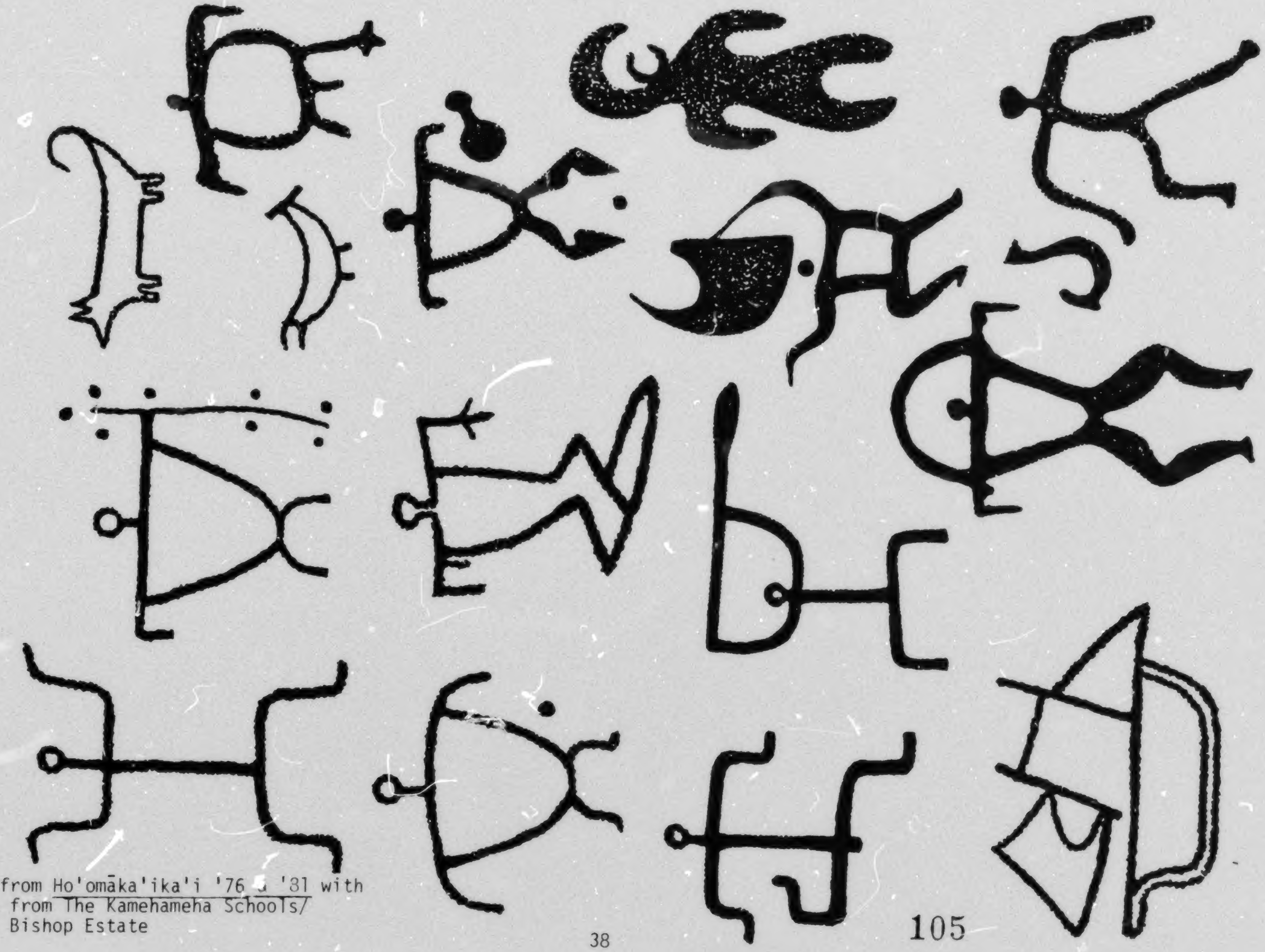
Whatever the reason for carving petroglyphs, some idea of how Hawaiians perceived the world and their place in it can be learned from these stone carvings.

Sources:

Ellis, William. "Narrative of a Tour Through Hawai'i," Honolulu: Hawaiian Gazette, 1917.

Cox, Halley. *Hawaiian Petroglyphs*, Honolulu: Bishop Museum Press, 1970.

PETROGLYPH SAMPLES



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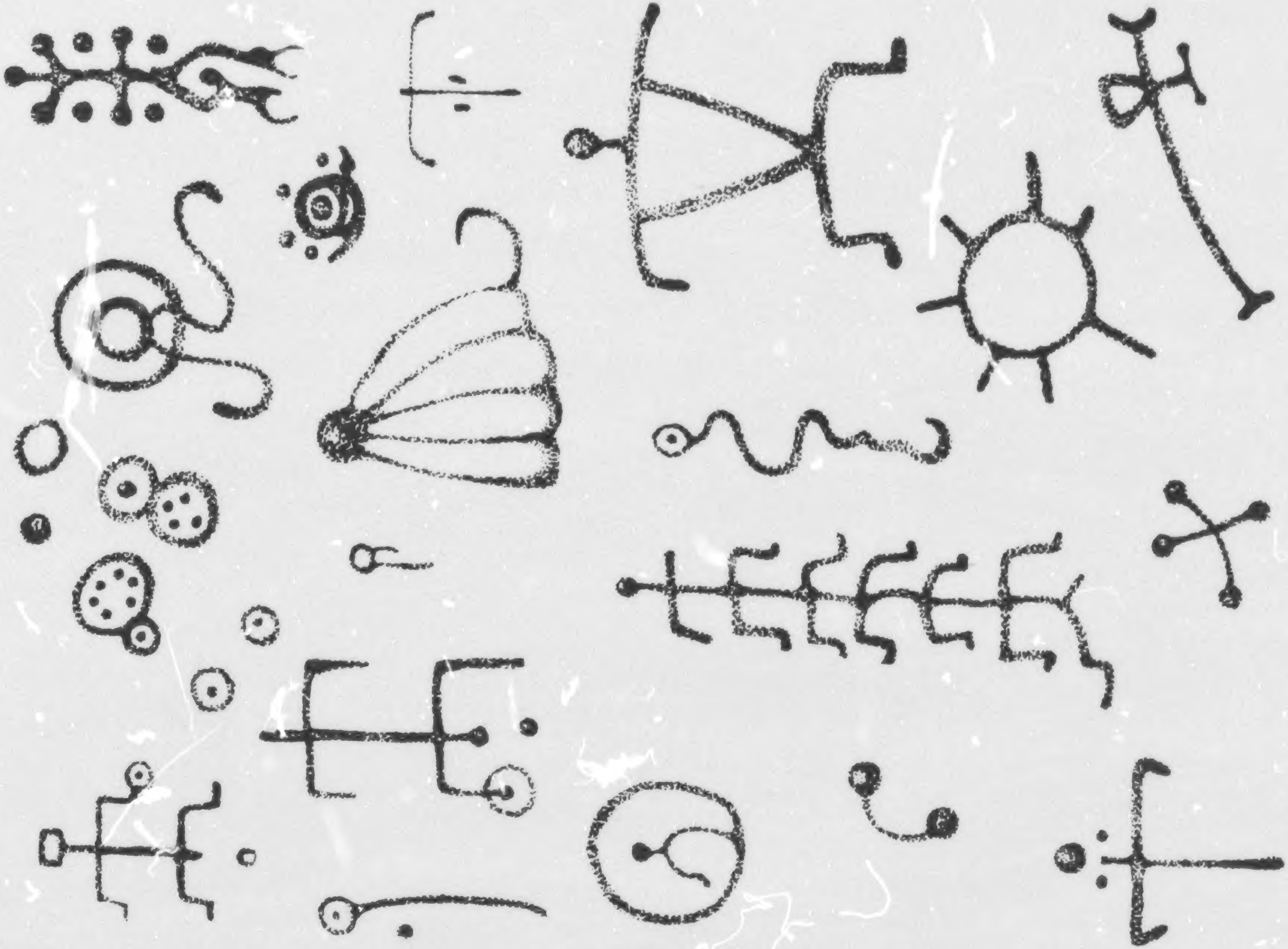
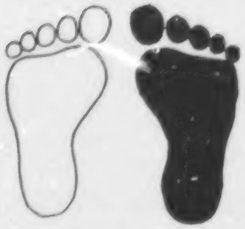
PETROGLYPH SAMPLES



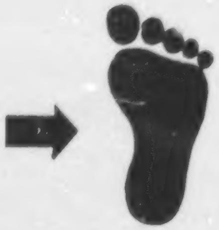
BASIC HULA STEPS

KĀHOLO: (vamp) 4 steps to the right, 4 steps to the left



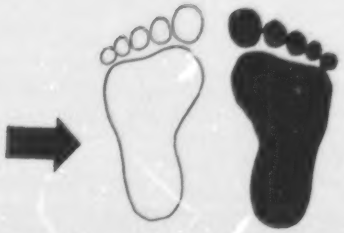
Left Right

1



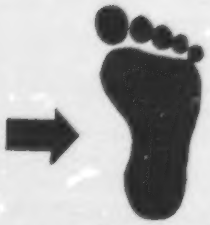
Step to the right swinging hips to the right.

2



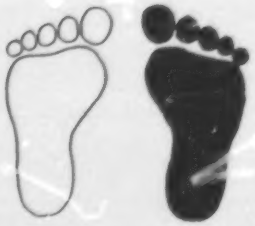
Bring left foot alongside stepping on the ball, then heel of the left foot

3



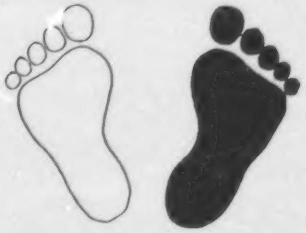
same as 1

4



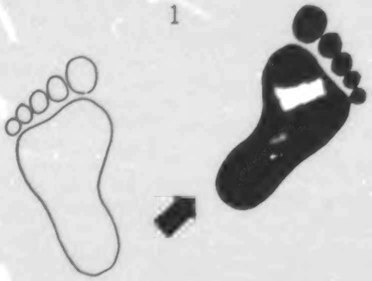
Bring left foot alongside tapping on the ball of the left foot. (Repeat the four steps moving to the left.

HELA: Bend both knees, and as one foot is extended at about a 45° angle to the front towards the side, shift the weight of your your body to the opposite side: return the extended foot to the original position and repeat the process with the other foot.



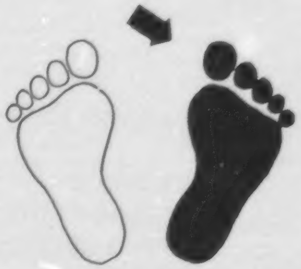
Left Right

1



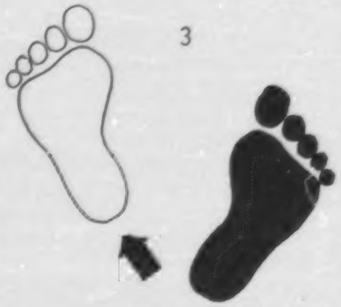
Extend and tap the ball of the right foot at about a 45° angle towards the front.

2



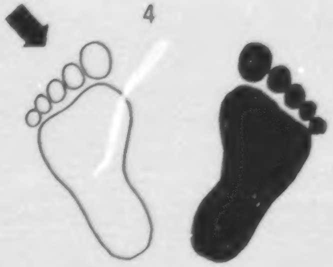
Return right foot to the original position.

3



Extend and tap the ball of the left foot at about a 45° angle towards the front.

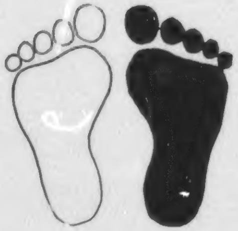
4



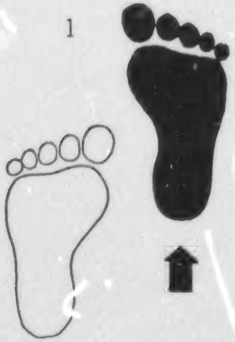
Return the left foot to the original position.

BASIC HULA STEPS

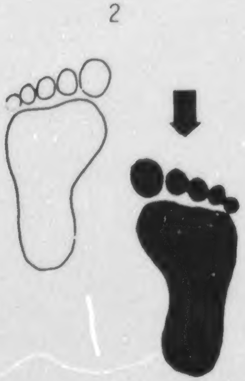
KĀWELU: One foot taps time with the heel, the toes being stationary, while the other foot, flat, steps forward and then a little back, twice or more; the step is repeated reversing the feet. (Kāwelu is called the "Kalākaua step" by some kumu hula.)



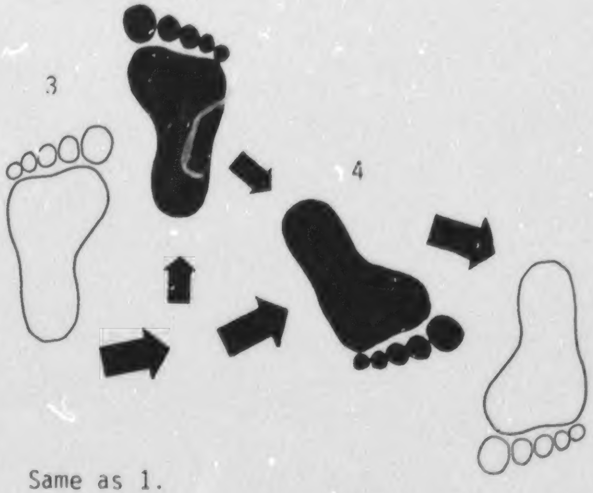
Left Right



Right foot steps forward swaying right lifting the heel of the left foot - leaving left toes stationary, swaying left putting the heel of the left foot down.



Same as 1 but stepping back.

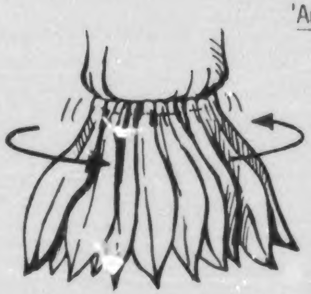


Same as 1.

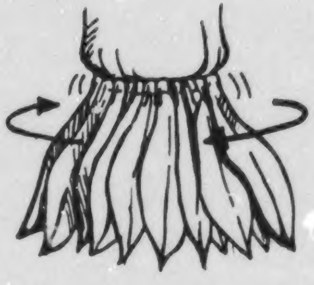
Turn to the opposite direction, swinging the left foot to the 1 position and repeating the movements.

'AMI: Hip Revolutions

'Ami 'ākau - right 'ami



Bend knees. Left foot is stationary. Lift the heel up and place it down making a circle with the hips going in a counter clock-wise direction.



'Ami hema - left 'ami

Bend knees. Right foot is stationary. Lift the right heel up and place it down making a circle with the hips going in a clock wise direction.

Aia Lā 'O Pele

Traditional

Aia lā 'o Pele i Hawai'i, 'eā	Pele is at Hawai'i
Ke ha'a maila i Maukele, 'eā	She is dancing at Maukele
'Ūhī'ūhā mai ana, 'eā	She surges and puffs this way
Ke nome a'ela iā Puna, 'eā	Munching away at Puna
Ka mea nani ka i Paliuli, 'eā	The beautiful one (is) at Paliuli
Ke pulelo a'ela i nā pali, 'eā	(Pele's fires are) rising fine on the cliffs
Aia ka palena i Maui, 'eā	Her (Pele's) boundary extends to Maui
'Āina o Kaululā'au, 'eā	Land of Chief Kaululā'au
I hea kāua e la'i ai, 'eā	Oh where shall we find peace
I ke 'ale nui a'e li'a nei, 'eā	In the great billows are we yearning
Ha'ina 'ia mai ka puana, 'eā	Tell the refrain
No Hi'iaka nō he inoa, 'eā.	A name song for Hi'iaka.
He inoa nō Hi'iaka-i-ka-poli-o-Pele.	In honor of Hi'iaka-in-the-bosom-of-Pele.

HOW TO TEACH CHANTS/SONGS

Suggested Procedures:

1. Write the words on a transparency, chart paper, or chalk board.

2. Play the song/chant so that the children can hear what it sounds like.

3. If there are several verses to the song/chant, teach the first verse following the procedures under 4. When the children are able to pronounce the words correctly, sing the first verse, then teach the second verse, etc.

4. Teach one line at a time.

    a. Say the entire line pronouncing the way the line will be sung while pointing to the words.

    e.g. E Hawai'i, e ku'u one hānau e

    b. Say a shorter part of the line asking children to ho'opili.

    E Hawai'i

    c. Repeat the words listening to the children's pronounciation until they say the words correctly, then go on to the next phrase.

    e ku'u one

    d. Same as c.

    hānau e

    e. Say two of the phrases, and have the children ho'opili.

    e.g. E Hawai'i, e ku'u one

    Be sure the children pronounce these phrases correctly because there is a tendency to say "ku'u home." Note that line one has the word "one" whereas line two uses the word "home." Proper attention at this time will avoid incorrect usage of these two words.

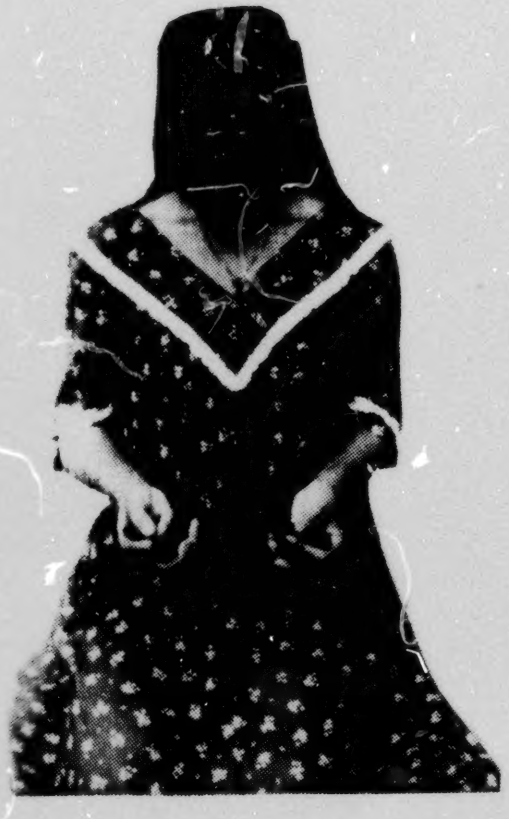
    f. Say the entire line and have the children ho'opili.

    g. Continue the procedure of teaching a line at a time till the song is completed.

5. There will be songs that can't possibly be taught in one lesson. When that happens, be sure to stop where there might be a natural break.

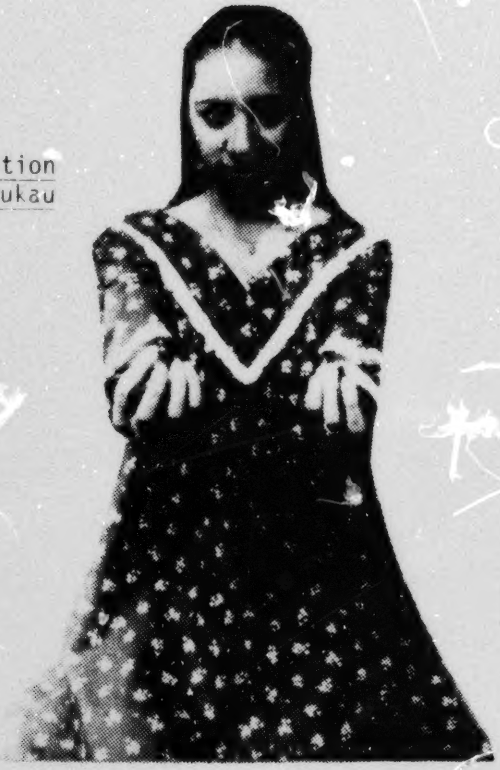
KĀHOLO (VAMP) USING THE 'ILI'ILI

HULA 'ILI'ILI



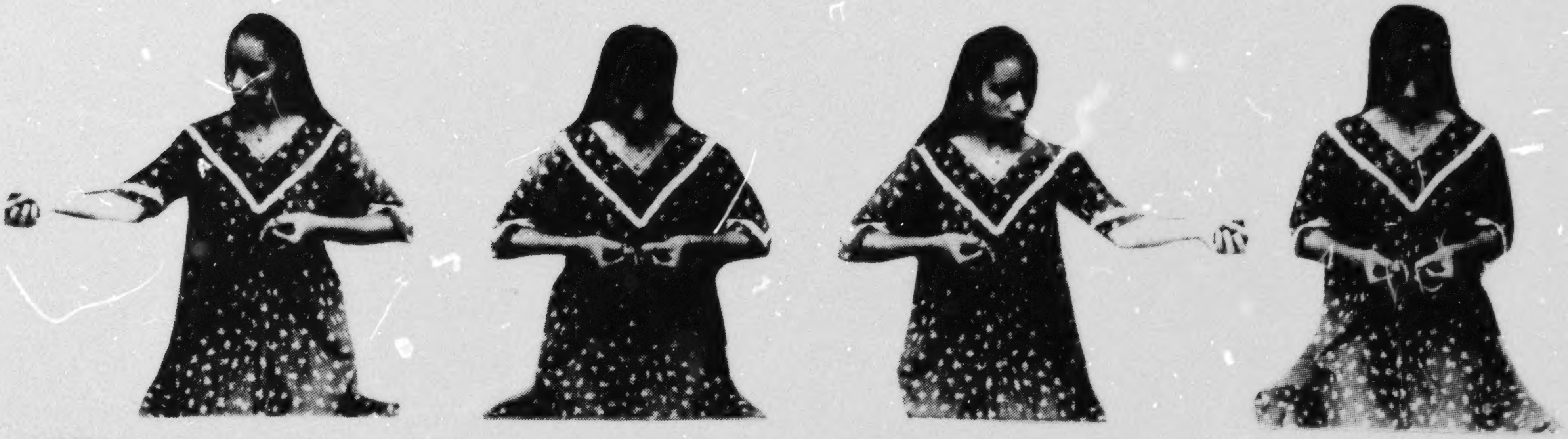
Two pairs of water worn pebbles are used. Hold one 'ili'ili between the thumb and index finger placing the other 'ili'ili on the other three fingers. The 'ili'ili lying flat on the three fingers clicks the first 'ili'ili.

First Position
Ho'omākaukau

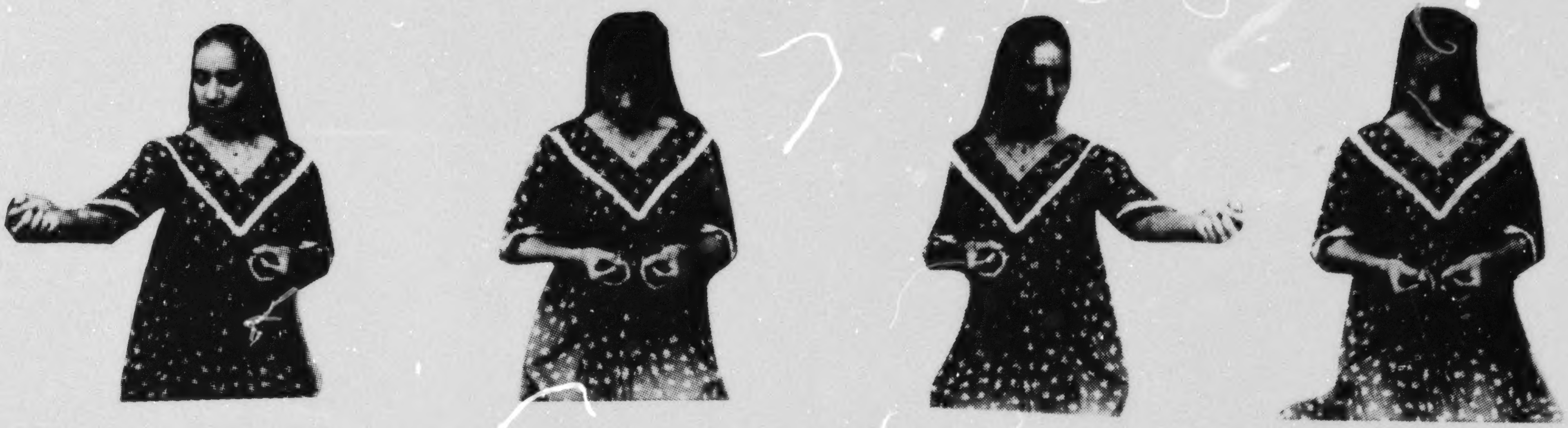


Arms are extended forward and center, holding the 'ili'ili firmly in both hands above the waist, at chest level.

TWO EXAMPLES OF VAMPS USING THE 'ILI'ILI



EXAMPLE 1. Arm is extended to the side. Hold each position for two beats.

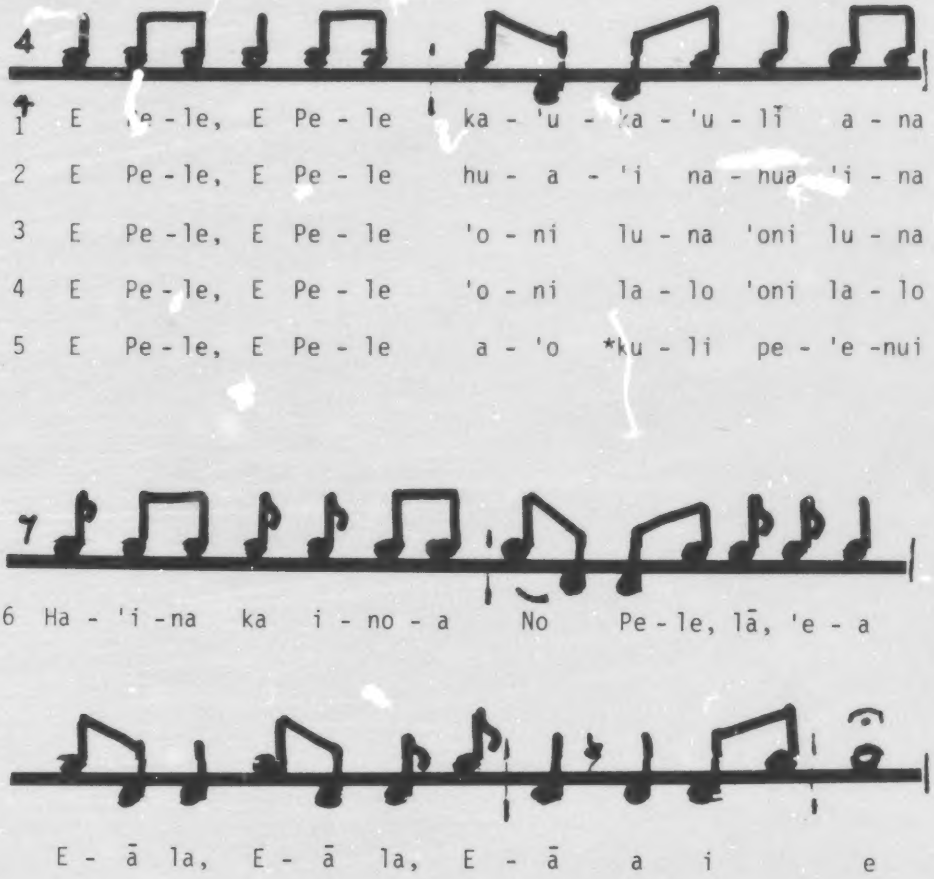


EXAMPLE 2. Arm is extended at an angle. Hold each position for two beats.

E Pele, E Pele

Beamer Family

Ho'omākaukau!
'Ae, E Pele! Pā!

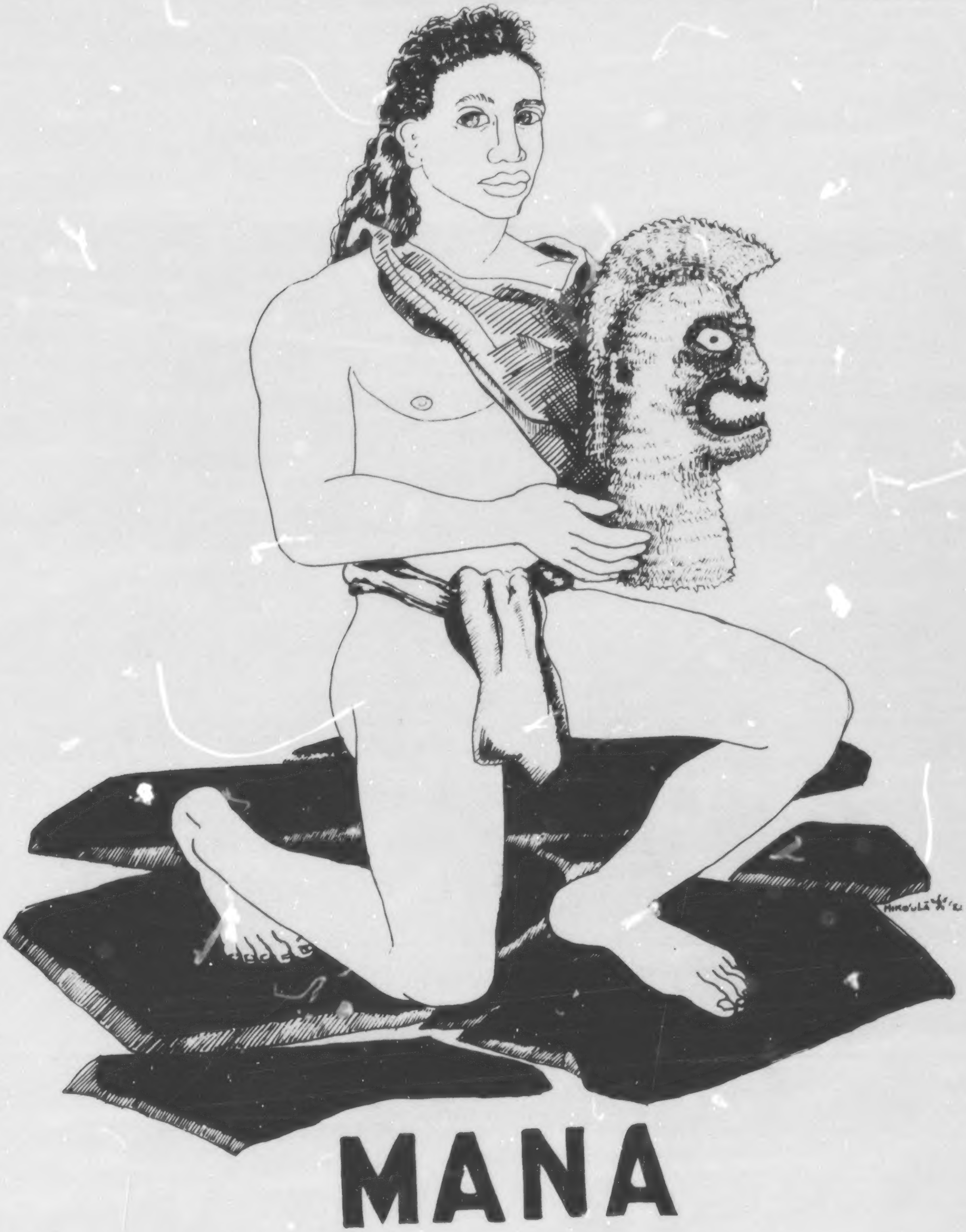

4
4
1 E Pe-le, E Pe-le ka-'u-ka-'u-lī a-na
2 E Pe-le, E Pe-le hu-a-'i na-nua 'i-na
3 E Pe-le, E Pe-le 'o-ni lu-na 'oni lu-na
4 E Pe-le, E Pe-le 'o-ni la-lo 'oni la-lo
5 E Pe-le, E Pe-le a-'o *ku-li pe-'e-nui
7
6 Ha-'i-na ka i-no-a No Pe-le, lā, 'e-a
E-ā la, E-ā la, E-ā a i e

Translation

1 Pele, Pele, hissing along
2 Pele, Pele, bursting forth
3 Pele, Pele, moving upward
4 Pele, Pele, moving downward
5 Pele, Pele, hide your big knees
6 In the name of Pele

*kulipe'e - creep
"We learned it kuli-pe'e nui"
knee -hide-big
Nona Beamer

Reprinted with permission
from Winona Beamer



MANA

The following lessons were developed to accompany the Social Studies 4th grade guide, Early Hawaiian Life, pp. 33-69.

Grade 4, Unit II/III

CONTENT AREAS	EMPHASES
SOCIAL STUDIES	Migration Polynesian migration Reasons for migration Migration theories Impact on Hawai'i Other Ethnic Groups Reasons for migration Impact on Hawai'i Canoe building Process of canoe building Tools and resources Role of the 'ohana Role of religion
SCIENCE	Winds, currents and clouds Effects on speed, direction and weather prediction Navigation when these factors change Seabirds Aids in navigation Identification of seabirds today Conservation practices

BEST COPY AVAILABLE

"Migration."

LEARNER OBJECTIVES

APPENDICES

- Investigates the different theories on the migration of the Polynesians to Hawai'i.
- Recognizes that the Hawaiian culture and way of life is now a part of America's multi-ethnic society.
- Recognizes that within any ethnic or racial group an individual is unique, similar to but different in some way from all other fellow members of the group and from other people.
- Identifies all of the plants and animals brought to Hawai'i by the Polynesians.
- Discusses some of the dangers likely to have been encountered on long ocean voyages in Polynesian sailing canoes.
- Recognizes the human physical, emotional and spiritual needs which had to be satisfied on long ocean voyages in Polynesian sailing canoes.
- Identifies methods used by the Hawaiians for finding answers to questions and for solving problems such as referring to legends or keen observation.

o Identifies ways in which the Hawaiians changed the land, environment and biota.

(See Early Hawaiian Life, pp. 37-38, for other objectives.)

1-5. See Science in Hawaii pg. N2 for Science objectives in "Hawai'i's People."

- Identifies all of the plants and animals brought to Hawaii by the Polynesians.
- Discusses the possible origins of the menehune, taking into account archeological evidence that the immigrants from Tahiti were probably much bigger than previous immigrants.
- Discusses some of the dangers likely to have been encountered on long ocean voyages in Polynesian sailing canoes.

Unit II/III-B "Navigation", pp. 73-75

-C Hawaiian Seabirds, p. 76

-H Hawaiian Vocabulary for Clouds and Weather, p. 83

CONTENT AREAS	EMPHASES
SCIENCE (CONTINUED)	Population dynamics: "Hawai'i's People" Factors affecting Hawai'i's growth and decline patterns Benefits and detriments of population change Hawai'i's future population based on extrapolation of data Polynesian-Hawaiian skies Constellations Main stars
LANGUAGE ARTS	Journal writing Interviewing skills Reading Ethnic folktales Legends of migration Comparing Hawaiian legends with other ethnic folktales Creative writing) Writing a play) Voyage to New Island Producing the play) Poetry - Composing poems for chants about canoe building

LEARNER OBJECTIVES	APPENDICES
• Describes some of the natural phenomena in Hawai'i using their Hawaiian names. • Discusses the impact of population changes in Hawai'i's history and identifies factors related to population dynamics.	
• Recognizes that within any ethnic or racial group an individual is unique, similar to but different in some ways from all other fellow members of the group and from other people. • Recognizes that the Hawaiian culture and way of life is now a part of America's multi-ethnic society. • Discusses the possible origins of the menehune, taking into account archeological evidence that the immigrants from Tahiti were probably much bigger physically than previous immigrants who probably came from the Marquesas. • Identifies some pre-historical figures and tells why they are important in Hawaiian history. • Works with partners or groups on Hawaiian language and/or culture oriented activities such as an oral presentation, a bulletin board display, an Aloha Week/May Day pageant, or Makahiki Festival.	

CONTENT AREAS	EMPHASES
HEALTH FOOD AND NUTRITION	Concepts of self and *'ohana* Who am I? I'm glad I'm me Cultural medicines and home remedies Food preparation for long voyages Comparison of Hawaiian food with other ethnic foods Nutritionally Calorie level Diet and health considerations for canoe paddles and other athletes
MUSIC	Singing with *'ukulele* accompaniment "I Am What I Am" "You Gotta Feel Aloha" Singing other ethnic songs "Siva Siva Maia" - Sāmoa "Sakura" - Japan "Planting Rice" - Philippines "Blue Flower" - China "Arirang" - Korea Chanting "Hoe Aku I Kou Wa'a" Creating chants about canoe building Canoe songs "Ku'u Wa'a" "Nā Hoe Wa'a"

LEARNER OBJECTIVES	APPENDICES
• Names many of the foods taken on a long voyage and indicates why they were and are important nutritionally. • Works with partners or groups on culture oriented activities. • Listens to and accepts opinions of others in group discussions. • Recognizes the human physical, emotional and spiritual needs which had to be satisfied on long ocean voyages in Polynesian sailing canoes. • Shares feelings about why one likes or dislikes Hawaiian food. • Practices behavior that illustrates respect for self, fellow schoolmates, teachers and community resource people. • Classifies common Hawaiian foods using the basic food groups classification. • Compares the eating habits of many Hawaiians today who eat American food with high fat and refined sugar content and low fiber content with the eating habits of Hawaiians of former times who ate generally a vegetable diet supplemented by seafoods and occasionally meat protein.	Unit II/III-D Basic Food Chart, p. 77 -E Nutritional Value of Foods in Hawai'i, pp. 78-79 -F Food for the Athlete, pp. 80-81 -G Myths About Food, p. 82
• Sings selected Hawaiian songs introduced by the teacher or kupuna while playing rhythmic or harmonic instruments ('ukulele, guitar, auto harp or Hawaiian instruments) in time with the beat. • Performs from memory a simple Hawaiian chant. • Defines indigenous and acculturated in relation to the fact that most cultures have music that is distinctly their own and they also have music that is a mixture of their own and that of other cultures with which they have had contact.	Unit II/III-A "Hoe Aku I Kou Wa'a", p. 72 -I Musical Compositions About Hōkūle'a, p. 84

CONTENT AREAS	EMPHASES
Music (Continued)	Listening *The Musical Saga of the Hōkūle'a*, "Wa'a Hōkūle'a"
Art	Multicultural arts and crafts Pencil and pen drawing Origami (Japanese paper folding) Chinese paper cutting Chinese kites Japanese brush painting Mobile - seabirds Carving a canoe Plaiting *lau hala* Braiding *'aha* (sennit cord)

LEARNER OBJECTIVES	APPENDICES
• Writes prose or poetry in English, using Hawaiian words and expressions where appropriate, expressing the student's feelings about Hawai'i, Hawaiian food, music, dance, people and history.	Unit II/III-J Journey of the Hōkūle'a - 1980, p. 85
• Demonstrates an appreciation and understanding for ethnic cultures by engaging in arts and crafts activities of those cultures.	

CONTENT AREAS	EMPHASES
GAMES AND RECREATION	Creating physical awareness Simple concentration on body parts Learning ethnic games Creative movement - hula Games and sports relating to the kai (sea)

LEARNER OBJECTIVES	APPENDICES
- Illustrates the tonal-rhythmic patterns of a Hawaiian chant through singing and performing interpretive dance patterns and body movements. - Coordinates motions and movements of hands and feet while performing a traditional hula kahiko or hula 'auana. - Participates competitively in Hawaiian games and sports. - Relates the use of Hawaiian games and sports and quieter pastimes in former times to improving coordination and agility, physical strength, logical thinking and memory. - Relates the use of Hawaiian games and sports and quieter pastimes to the training of youthful ali'i for leadership in former Hawaiian times.	

The following lessons were developed to accompany the lessons found in Early Hawaiian Life, pp. 33-55, "Migration".
Grade 4, Unit II/III

SCIENCE

- The following activities allow the children to study the signs of nature and how the Hawaiians used these signs to navigate from one point to another.

Review the signs used by the immigrants in navigation. Now that they have experimented with wind and current, have them experiment with cloud formations.

1. Take them out onto the playground and have them observe cloud formations.
2. Ask:
   a. Are there many different types of clouds?
   b. How many different types do you observe?
   c. Can you predict weather by studying clouds?
3. Use an encyclopedia or a science book to find out the different kinds of clouds.
4. Have the children observe the cloud patterns for a week and record the weather and the name of the cloud on a chart. E.g.:

Date	Name of Cloud		Weather	
	English	Hawaiian	English	Hawaiian

LANGUAGE ARTS

- Language activities to help children become aware of culture transference

1. Have the children write a diary or daily journal
   a. Conduct a lesson on journal writing. Read excerpts from journals written by visitors to Hawai'i such as:

      C. S. Steward. Journal of a Residence in the Sandwich Islands, University of Hawaii Press, 1970, pp. 39-42.

   b. Encourage the children to write about what they can envision on a long journey and mostly about the feelings of fright, apprehension, joy, etc., that may be experienced on such a journey.
   c. Have them keep a record of their imagined journey for about seven days. Have them include the food they would eat and the activities they would engage in.
2. Develop the children's interviewing skills
   a. Have the children practice interviewing techniques in the classroom with each other. Work on courtesy, good listening and questioning techniques, attentive response and genuine interest.
   b. Teach them how to use the tape-recorder.

HEALTH

- The following activities can be used to help children become aware of the contributions made by their cultural groups to life in Hawai'i.

Concepts: Self and the 'Ohana

See Early Hawaiian Life, p. 51, for genealogy chart.

1. Reproduce this chart for the children and have them interview their grandparents to find out more about themselves.
2. Encourage them to bring pictures of their parents or grandparents, siblings, and especially of themselves to share.
3. Set up a "cultural corner" and have these pictures displayed.
4. Have the children write a brief narration about themselves telling why "I'm Glad I'm Me". Mount these with their genealogy chart on the board.
5. Talk about the concepts of self and the 'ohana.

   See: Early Hawaiian Life, pp. 208-223

   Nā Ki'i Ho'ona'auao, 17" x 22" posters illustrating these concepts

Recall and remind the students of these 'ohana concepts at every opportunity you have daily.

MUSIC

- Music activities to help build self concept through ethnic identity and appreciation.

Song: "I Am What I Am"
Music, Grade 6, Comprehensive Musicianship Program, p.3.

This song can be taught after the lesson in health on self-concept and 'ohana.

1. Talk about the words to the song and what they mean.
2. If the LP, I Am What I Am, Decca Records, is available, play the song for them. It is sung by Danny Kaleikini.
3. Chant the song according to rhythm and stress.
4. Sing the lines and have the children repeat them after you.
5. Have the children point out similar lines and decide where in the song they want to sing louder (fortissimo) or softer (pianissimo).
6. Talk about feeling "maika'i" (good). Discuss the concept of aloha as part of feeling good about oneself.

   Song: "You Gotta Feel Aloha," recorded on an LP of the same title by Al and Clayton Nalua'i.

ART

- Art activities to help build self concept through ethnic identity and appreciation.

My favorite activities

1. Have the children list four things they enjoy doing during their free time.
2. Encourage them to meet in groups of four to six students and share why they enjoy those activities.
3. Have them sketch rough drafts on manila paper of such activities. Encourage them to draw big pictures and to color them appropriately.
4. Have them share these posters with the other 4th grade classes.

My transportation (an illustration to accompany the journal writing under language arts.)

Have the children imagine what their wa'a (canoe), ship, boat, kayak, or whatever they traveled on looks like. Have them sketch it on white drawing paper using a soft lead #2 pencil. Teach them to do shading.

GAMES AND RECREATION

- Physical and cultural awareness activities to improve self awareness.

1. Have the chidren share how they feel about their physical bodies.
2. Have them close their eyes and concentrate on the body area that you name. Have them mentally push all of the stress out of each part of their bodies so they become aware of their kino (body).
3. Work on one body part at a time. Name the body part and give them the Hawaiian equivalent. E.g., "Concentrate on your manamana wāwae (toes). Move them, wiggle them, stand on them, relax them. Raise your lima (hands) above your heads. Shake them (lululi), clap them (pa'ipa'i), etc."

   Continue with this kind of exercise to motivate each child to be aware of each body part as he/she exercises the part.

- Cultural games to build cultural awareness

1. Assist the children in researching the games they play that originated in another country.

   a. Jump Rope

   b. Jup Jee - jacks

   c. Tiak Een Jeer - badminton

   Reference: Young and Lum. Chinese. University of Hawai'i, pp. 24-25.

2. Talk about why people play games...

   - exercise
   - physical fitness
   - fun and relaxation, etc.

SCIENCE

For Hawaiian vocabulary relating to clouds and weather, see: Appendix Unit II/III-H, p. 83.

5. If you were a Polynesian voyager, which cloud formations would you watch to determine when to set sail?

6. Identify the seabirds that the Hawaiians used as indicators of land.

   a. Find out about their habits and their habitat.

   b. Locate these seabirds today around the island and mark them on a wall map. Source: Lindo. Polynesian Seafaring Heritage, pp. 133-136.

   c. Find pictures of the birds or draw pictures (in art) and create a bulletin board display of waterbirds.

   d. Invite a guest speaker to present a talk on what is being done today to preserve the sea birds.

   e. Teach the children the Hawaiian names for these birds. See: Appendix Unit II/III-C, p. 76.

7. Population dynamics is the study of factors that affect a population. The following science lesson can be used to explain Hawai'i's population changes from the early migration period.

LANGUAGE ARTS

   c. Have them conduct the interview in Early Hawaiian Life, p. 40 using a tape-recorder.

   d. Encourage them to allow their grandparents to share cultural things about their lives in addition to answering the guide questions.

3. Plan a field trip to a cultural center to view collections and displays of the various ethnic groups.

   a. Bishop Museum

   b. Waipahu Cultural Gardens

   c. Chinese Cultural Plaza

   d. Japanese Byodo-In Temple in 'Ahuimanu

   e. Honolulu Academy of Arts

   f. Mission Houses Museum

   g. Chinatown

   h. Lyman House Museum

   i. Baldwin House Museum

   j. Kaua'i Museum

   k. Kamuela Museum

   l. Hāna Cultural Center/Museum

   m. Polynesian Cultural Center - call 293-3118 for pre-visit assistance.

HEALTH

6. Study cultural medicines

   a. Encourage the children to share some "home remedies" their parents or ancestors brought with them to Hawai'i. Talk about the uses and the danger or lack of danger involved.

   b. Visit an herb store or herbalist to find out if the immigrants did bring some knowledge of how to take care of simple ills.

7. International luncheon

   To culminate this study of ethnic cultures within your classroom, plan an international luncheon with the children. Try to have a representative dish from each cultural group represented in your class. Some of the dishes may be made in class a few days early such as kim chee or Filipino rice cake so that the children can see how they are made. Others can be prepared at home with the child helping the parents prepare the food. A sign-up sheet should be sent home so there are no duplications. Have the children sing and dance the songs they learned in music.

   Resource: Unit on Nutrition. Nānākuli Model Schools Project, Department of Education, State of Hawai'i, TAC 73-6465. 1973. (Contains many excellent suggested activities for classroom use.)

MUSIC

a. This song has a very catchy rhythm so the children must listen carefully. Play the recording two or more times through and have the children listen for phrasing.

b. Have the song written on a chart. Follow the words with a pointer and the second time through encourage the children to think about the words. Have them share the meanings of aloha by pointing them out on the chart. Underline the meanings of aloha in the song.
Encourage the children to suggest more meanings of aloha.

c. Have them say the words in correct rhythm.

d. Have them sing the song, verse first, then the chorus.

- Ethnic songs

1. Learn a variety of ethnic songs.

   See: Kelly. Folk Songs Hawai'i Sings.

   "Siva Siva Maia," p. 34
   "Sakura," p. 42
   "Planting Rice," p. 56

ART

- Ethnic art

1. Learn origami - Japanese art of paper folding which is a favorite pastime with Japanese children. Reference: Florence Sakade. Origami.

2. Do Chinese paper cutting and Chinese kite making. Reference: Young and Lum. Chinese,University of Hawai'i, pp. 25-33.

3. Experiment with Japanese painting and calligraphy.

   a. Borrow Japanese brush drawings and scrolls from the Honolulu Academy of Arts lending collection. Talk about the space, painted versus unpainted.

   b. Construction

      Materials needed: newsprint, black ink or water color, sumie brushes.

   c. Demonstrate correct brush strokes: Press down with brush to create thick, bold line and lift up gradually while making the stroke until the line is light and thin.

GAMES AND RECREATION

3. Engage in some cultural games including Chinese jump rope. Discuss the kinds of skills involved in each of the games. Compare the Chinese Jup Jee (jacks) to the Hawaiian jacks game called kimo.

   See: Mitchell. Hawaiian Games for Today.
   DOE/OIS, Hawaiian Studies. Nā Ka'ao Kāhiko/ Illustrated Bilingual Hawaiian Tales, "Ka Mo'olelo o Pā'ula," pp. 155-178.

4. Encourage the children to create new games using materials from the Hawai'i environment just as the Hawaiians did many years ago. Recognize creativity and share the results with others. Please inform OIS/Hawaiian Studies or the District Resource Teacher of newly developed Hawai'i-oriented games and recreational activities so that these may be given statewide exposure in inservice training sessions.

SCIENCE

Everyone in Hawai'i including Hawaiians, is descended from immigrants. Study the factors that affect a population. Use the lesson plan, from *Science in Hawai'i*, "Hawai'i's People", pp. N1-N10. The accompanying video tape is available at the ETV Center at Mānoa Elementary School. Call 988-2117 and allow one to two weeks for processing and delivery.

Also check with your district office.

LANGUAGE ARTS

4. Read folktales of various ethnic groups.

   E.g.,

   Lattimore, Eleanor. *Peach Blossom*. N.Y.: Harcourt, 1943.

   Louie, Ai-Ling. *Yeh-Shen: A Cinderella Story from China*. N.Y.: Philomel Books, 1982.

5. Who were the real *menehune* or Tahitian *manahune*? Account for the mythical *menehune* now discussed in Hawai'i. An author cited below (Luomala) suggests that *menehune* stories showing their power to do things the *ali'i* could not do (feats of building in one night, etc.) was a way by which the oppressed class got back at the oppressive *ali'i*. It showed the *ali'i* beholden to the common people. Consider if the *menehune* mentioned in legends could have been Marquesans who were smaller physically than the Tahitian *ari'i* who came with Pā'ao in the 1200's A.D. *Menehune* in Hawaiian also means to gather together to complete a task like the legendary race of small people who worked at night. In Hawaiian, *manahune* literally means destitute of power, which could well describe the condition of the smaller early settlers compared to their new Tahitian overlords.

   References:

   Barrow. *Incredible Hawai'i*.
   Hyerdahl. *Voyage on the Raft Kon Tiki*.
   Luomala. *Menehune of Polynesia*.
   Mitchell. *Resource Units in Hawaiian Culture*, Unit II, "Polynesian Settlement Pattern," p. 15.

HEALTH

Music

"Blue Flower," p. 66
"Arirang," p. 72

2. Encourage a Japanese parent or resource person to teach the children a Japanese dance. Do the same for any other ethnic group represented in your class. Tape the songs for future reference.

3. Look for films that depict special ethnic ceremonies such as the Japanese Tea Ceremony.

   Additional sources:

   Gillett. Comprehensive Musicianship Through Classroom Music, Grade 4, pp. 112-123.

   Hawai'i Multicultural Awareness Project. UH Col. of Education-CRDG, 1977:

   Grade 4 program, Times For Celebration.

   Grade 5 program, Families In Hawai'i, Units I - IV.

   In sharing artifacts and customs brought by immigrants to Hawai'i, students will come to realize the common thread of immigration which runs through most of our families.

Art

d. Have the children begin by copying Japanese characters for happiness, good luck, long life, the seasons.

e. After some practice sessions, they can draw insects, birds, bamboo, carp and grasses.

f. Mount these brush paintings like scrolls for wall hangings.

4. Other ethnic art projects may be found in:

   Rainey. Ethnic Art Projects. Hawai'i Multicultural Awareness Project. UH College of Education-CRDG. 1977.

Games and Recreation

SCIENCE

- Study the Hawaiian skies, especially the Dipper - Nāhiku, Arcturus - Hōkūle'a, North Star - Hōkūpa'a, Sirius - 'A'ā

  Source: Lindo. Polynesian Seafaring Heritage, pp. 112-121.

  1. Study the constellations (nā huihui) in the northern and southern skies and highlight those stars (nā hōkū) that were important in navigating to and from Tahiti. E.g., in Canis Major, Sirius ('A'ā) is the star that passes directly over Tahiti. In Bootes, Arcturus (Hōkūle'a) is a star that passes directly over the island of Hawai'i.
  2. Study the navigation of Polynesians from New Guinea to Easter Islands. Source: National Geographic Magazine, December, 1974, pp. 732-756.
  3. Have each student select one constellation to research and report on to the class (see art lesson for illustration).

- Review the winds and currents of the Pacific Ocean and how they affected speed and direction.

  1. Read excerpt from Appendix Unit II/III B, pp. 73-75. This article describes navigation in clear weather, windy or stormy weather and cloudy weather when the stars were under cover.

LANGUAGE ARTS

- Reading and writing stories about early voyages to and from Hawai'i. An excellent collection of stories is in the set of story books published by the Polynesian Voyaging Society.

  A Canoe for Uncle Kila

  A Voyage to Tahiti

  Hōkūle'a

  The Vision of Mo'ikeha

  1. Read or tell the children about the "History of Mo'ikeha."

     Resource: Lindo. A Curriculum Guide on Polynesian Voyaging (Teacher's Guide), pp. 37-41.

     Other sources of Mo'ikeha legends:

     Fornander. Collection of Hawaiian Antiquities and Folklore, Vol. VI, No. 2, p. 323.

     Malo. Hawaiian Antiquities, pp. 7-9, 134.

     a. Discuss some cultural differences between early and modern Hawai'i.

     b. Talk about the roles played, education, decision making, religious implications and expertise involved in navigation.

  2. Creative writing. Have the children imagine themselves as canoe paddlers or navigators on voyages in search of new islands on which to live. Have them plan the voyage just as described in stories they have read.

HEALTH/FOOD AND NUTRITION

- Food preparation for long voyages

  1. Study the nutritional value of the foods the Polynesians brought to Hawai'i. (Refer to Early Hawaiian Life, p. 35 and Appendix Unit II/III-E, pp. 78-79.)

     a. Talk to nutritionists or have a nutritionist visit the class to talk about the food products.

     b. Prepare a chart showing the nutritional value of each food.

     c. Prepare a menu that a voyager may have had daily on a long trip for breakfast, lunch, and dinner, including a snack. Include the amount eaten (e.g., 1/2 cup, etc.) Check this food intake with the daily requirements for good health using the Basic Food Chart. See Appendix Unit II - D, p. 77. Discuss and then determine if this diet was a "healthy diet."

     d. Write a menu for a canoe paddler today. Compare the food intake, the nutritional value and the cost of these foods for one day with those of an early Hawaiian paddler.

  2. Dry some foods just as the early Hawaiians did.

     i'a - fish
     kalo - taro
     mai'a - banana
     'uala - sweet potato
     'ulu - breadfruit

NOTE: These activities are continued on the NEXT page......

SCIENCE

2. Refer to Lindo. Polynesian Seafaring Heritage, pp. 102-107, for a description of how the Polynesians used the signs in the clouds, wind, currents, floating debris, sun, stars and birds to guide their canoes. This article contains diagrams and pictures adapted from the December 1974 issue of National Geographic Magazine. Enrichment activities can be found on p. 107 of this reference.

3. Set up an experimental corner. Get a large pan of water. Make a canoe model and place it in the pan. Set up weather conditions using a fan for wind and experiment to see how wind and current forces affect the canoe.

Have the children generalize the concept that energy forces cause movement and change.

LANGUAGE ARTS

Encourage them to include

a. Preparation

b. Actual voyage

1) Navigation
2) Signs
3) Food (fishing)
4) Feelings (fright, weariness, etc.)
5) Weather, dangers

c. Arrival

3. Have the children use references to look up the meaning of PELAGIC (relates to the open sea as opposed to coastal waters). After doing other research on this topic, the children should write a paper on the differences between pelagic and land-based birds.

4. Culminating activity

Have the children select from the various writing assignments those which describe well the migratory voyage.

Have them work in various 'ohana committees to create a script for a dramatization of "A Voyage to a New Home."

HEALTH/FOOD AND NUTRITION

pa'akai - salt, have the students gather salt on the rocky shores or try to make.

See: Handy. Ancient Hawaiian Civilization, 1965, pp. 95-96.

Lindo. Polynesian Seafaring Heritage, pp. 122-132. This source has a list of foods introduced to Hawai'i by the early settlers, pictures of the plants, and directions on how to dry Hawaiian foods.

3. Compare the foods the early Hawaiians ate on long voyages with those eaten by other immigrant groups on their ocean voyages to Hawai'i. These could be the missionaries, contract laborers from Asia and Europe and others such as settlers and homesteaders from America.

Use the research results gained from activity #1 on the previous page. See: Appendix Unit II/III-E, pp. 78-79.

Use a wall chart to display the results of these activities. Show the immigrant group along the left matrix and the foods eaten from each of the Basic food groups.

ART

- Art activities relating to Polynesian migrations

1. Constellations

a. Have the children illustrate the constellations they selected to study in their science lesson #3, p. 64.

b. Have the students create a white-on-black representation of the constellation using black construction paper, a white pentel or crayon, white glue and glitter.

2. Movie roll

a. Have the children plan a series of illustrations to go along with the creative stories which they wrote in activity 2 under language arts.

b. Illustrate the stories utilizing the full sheet of letter or legal size paper and organize the illustrations into a movie roll to be shown to other classes.

The following lessons were developed to accompany the lessons found in the 4th grade Social Studies Guide, Early Hawaiian Life, pp. 56 to 70, "Canoe Building."

SCIENCE

- The following activities allow the children to investigate the properties of the woods used in canoe building.

  1. Study the different trees used in canoe building

     a. Show the children pictures of the trees used by the Hawaiians for canoe building; (See Early Hawaiian Life, p. 57) or,

     Show them slides of these trees.

     b. Encourage the children to share their knowledge about these specific trees.

     c. Have them bring from their homes, articles that are made from the wood of these trees.

     E.g.: koa bowl, koa tray or anything that is made from any kind of wood (mango wood bracelet, milo bowl, monkey pod bowl.)

     d. Set up a corner display of all the articles brought by the children.

        1) Encourage the children to touch the articles carefully and lift them to see the variations in weight.

LANGUAGE ARTS

- Activities in language that can be used along with the study of the canoe-building process.

  1. Creative writing - Imagine yourself as an apprentice of a kahuna kālai wa'a (canoe builder)

     a. Describe how you were selected to be an apprentice. What qualifications did you have?

     b. Explain the kind of training you have received. Include religion, skills, physical fitness program, etc.

     c. Describe your place in the kauhale (complex). Are you highly respected?

     d. Describe your first trip to the koa forests and what you observed there, the trip down the mountain, and the work in the hale wa'a (canoe house) to complete the canoe.

  2. Hawaiian language: Have the children learn the names of the different parts of the canoe. See: Early Hawaiian Life, p. 68.

  3. Poetry - Motivate the children to compose chants about the canoe or of any of the steps involved in the building of a canoe.

     a. Compose a chant that may be used by

HEALTH/FOOD AND NUTRITION

- Discussion questions on the health of a canoe paddler.

  1. Based on what we have charted, which group of immigrants appear to have had a well-balanced diet?

  2. Which group appears to have had a high calorie diet? Why did they need such a diet? (Hawaiians)

  3. If you are an athlete, or engage in heavy activity such as canoe paddling, what kind of diet do you need? See: Appendix Unit II/III-F, pp. 80-81.

  4. Which factor determines the energy you need? (activity) What is the source of that energy? See: Appendix Unit II/III-F, pp. 80-81.

  5. What particular foods are a good source of high energy?

  6. We hear people say that we should not drink water when we are playing. How true is this? Discuss myths about food. See: Appendix Unit II/III-G, p.82.

MUSIC

- Composing and singing songs and chants about canoeing:

  1. Take the canoe poems written in language arts and set them to chants. If the children have not had enough experience with or exposure to chants, provide them with some listening experiences.
  2. Look for records in your school library or check with the state library branch in your area for recordings.
  3. Ask your school kupuna to kōkua in this activity. Ask the kupuna if he/she is able to do simple chants for the children.
  4. Ask your music resource person to present a lesson on Hawaiian chants and the minor 3rd pitch.
  5. Encourage the children to create their own style with their chants. Have them memorize them and then present them at a school assembly.
  6. Teach the children some canoe songs.

     See: Māhoe. E Hīmeni Hawai'i Kākou.

     "Ku'u Wa'a," p. 36.

     "Nā Hoe Wa'a," p. 92.

ART

- Art activities in canoe building

  1. Carving

     Using hau or balsa, construct a simple outrigger canoe following the shape of a typical Hawaiian canoe. See Early Hawaiian Life, p. 68, for illustration.

  2. Weaving

     Make a lau hala sail.

     a. See: DOE/OIS. Resource Units in Hawaiian Arts and Crafts, pp. 69-74.

     b. Have the children experience the plaiting of lau hala including all the steps:

        1) Gathering the leaves and cleaning them
        2) Dethorning, deribbing the leaves
        3) Wiping, softening, rolling
        4) Cutting into proper widths
        5) Softening strips
        6) Plaiting

PHYSICAL EDUCATION

- Physical fitness for canoe paddlers

  1. Ask

     a. If you were living in early Hawai'i, what kinds of activities would help prepare you for canoe paddling and survival on a long trip to a distant land?

        Allow the children to predict. (swimming, canoe paddling, running, wrestling, lifting heavy rocks, etc.)

     b. What do canoe paddlers today do to prepare for canoe paddling? (jogging, swimming, etc.)

  2. Have the students participate in some physical fitness type activities from both the early Hawaiian period and the present day.
  3. Participate in the Department's drownproofing program.
  4. Have the children engage in some water sports to build strength, skill and coordination in the water. E.g.:

     aho loa (long breath) - staying under water as long as the breath can be held

     kaupua - swimming and diving for submerged objects

     lele kawa - plunging feet first into water with the least possible splash

SCIENCE

2) Divide a table in two halves: one for "heavy wood" and one for "light wood." Have the children agree on which side of the table the pieces should be placed, or

3) Give each child a sheet of paper with two columns and have them list the various woods in the "correct" columns.

2. Discuss what the children have learned about the uses of various woods in Hawaiian canoe building.

   a. Talk about the various woods that the Hawaiians used for different parts of the wa'a (canoe). These included koa, kukui, wiliwili and 'ulu (breadfruit) for the hulls; hau and 'ōhi'a lehua for the 'iako; and, hau and wiliwili for the ama.

   b. Experiment with the various woods for their physical properties--bouyancy, workability, durability and resistance to insects and rot. Discuss these properties and how they relate to canoe building. Have the children express generalizations about the use of trees by the early Hawaiians.

LANGUAGE ARTS

the kahuna kālai wa'a as he struck his ko'i (adze) into the trunk of the koa tree.

b. Compose a chant that may be used as the canoe was carried down the mountain. These poems, written in English, may be translated by the kupuna in your school or a community person, and set to chant form in music class. Ask your kupuna to kōkua.

HEALTH/FOOD AND NUTRITION

MUSIC

Hōkūle'a songs

a. See: Lindo. Polynesian Seafaring Heritage, pp. 159-167.

b. See: Appendix Unit II/III-I, p. 84.

c. Listen to: The Musical Saga of the Hōkūle'a, LP. Lyrics by Keli'i Tau'ā and music by Roland Cazimero.

1) The words to the songs are included in the dust jacket of the album and should be used in teaching some of the songs to the children.

2) This can be a rich listening experience for the children. Discuss with them how to use their imagination and provide them with any helpful hints you might know about effective listening techniques.

a) Tell them that they are going to be taking a trip to Tahiti in their imagination.

b) Show them a transparency of the map in Appendix Unit II/III-J, p. 85.

ART

3. Braiding 'aha

Make a ball of 'aha (sennit cord) to use for tying the parts of the canoe together. See: Early Hawaiian Life, p. 67.

4. Make a kā wa'a (canoe bailer) using a coconut shell.

See: DOE/OIS. Resource Units in Hawaiian Arts and Crafts, pp. 34-35.

PHYSICAL EDUCATION

- Activities to build awareness of the physical fitness required by the paddlers of Hawaiian double- and single-hulled canoes.

Hula - Creative movements for canoe paddling

1. After learning the canoe chant, "Hoe Aku I Kou Wa'a," in music activity #7, encourage the children to create hand and body movements for the chant.

2. Write the English interpretation on a chart and let the children create body movements for the chant.

3. Talk about the physical fitness needed for long journeys to distant islands. Encourage the children to dramatize possible types of activities that the Hawaiians engaged in to improve their fitness.

4. Using Mitchell's Hawaiian Games for Today, decide together on a couple of sports that the Hawaiians may have used to prepare their bodies for these long trips. Teach these games to the children. If this source is not available, see: Dunford. The Hawaiians of Old, pp. 158-164.

c) Discuss with them the distances that the Polynesians had to travel and how long it took them to travel using wind and paddle power.

3) Play "Doldrum Blues" without revealing the title.

a) Have the children describe where they are and how they feel.

b) Have them explain why the music makes them feel that way.

7. Introduce a simple chant for canoe paddling:

"Hoe Aku I Kou Wa'a" by Violet-Marie Mahela Rosehill. See: Appendix Unit II/III-A, p. 72. Write the words on a chart.

a. Discuss familiar vocabulary:

hoe	- paddle	kai	- sea
wa'a	- canoe	pō	- night
nalu	- wave	lā	- day
nui	- big	li'ili'i	- small

b. Chant the entire chant for the children. Get kōkua from kupuna/resource persons if needed.

8. Learn the chant which Kamahu'alele was believed to have chanted when he arrived in Hawai'i from Tahiti. See Mitchell. Resource Units in Hawaiian Culture, p. 18.

9. Composing - Encourage the children to write their own four-line chant. Write the lyrics and then set the poem to chant form using two or three tones.

10. Song:

"Kā I Ka Hoe" by Irmgard Aluli. Recorded on Keiki O Waimānalo, LP, Tradewinds Records.

a. Because the words of this song are repetitive, encourage children to create paddling motions for this number.

b. Phrases to focus on: Kā i ka hoe - pull on paddle with all of one's strength; Pa'a i ka hoe - grasp the paddle.

c. Decide:

1) How many paddlers will be needed for a wa'a kaukahi (single hulled canoe) or a wa'a kaulua (double hulled canoe)?

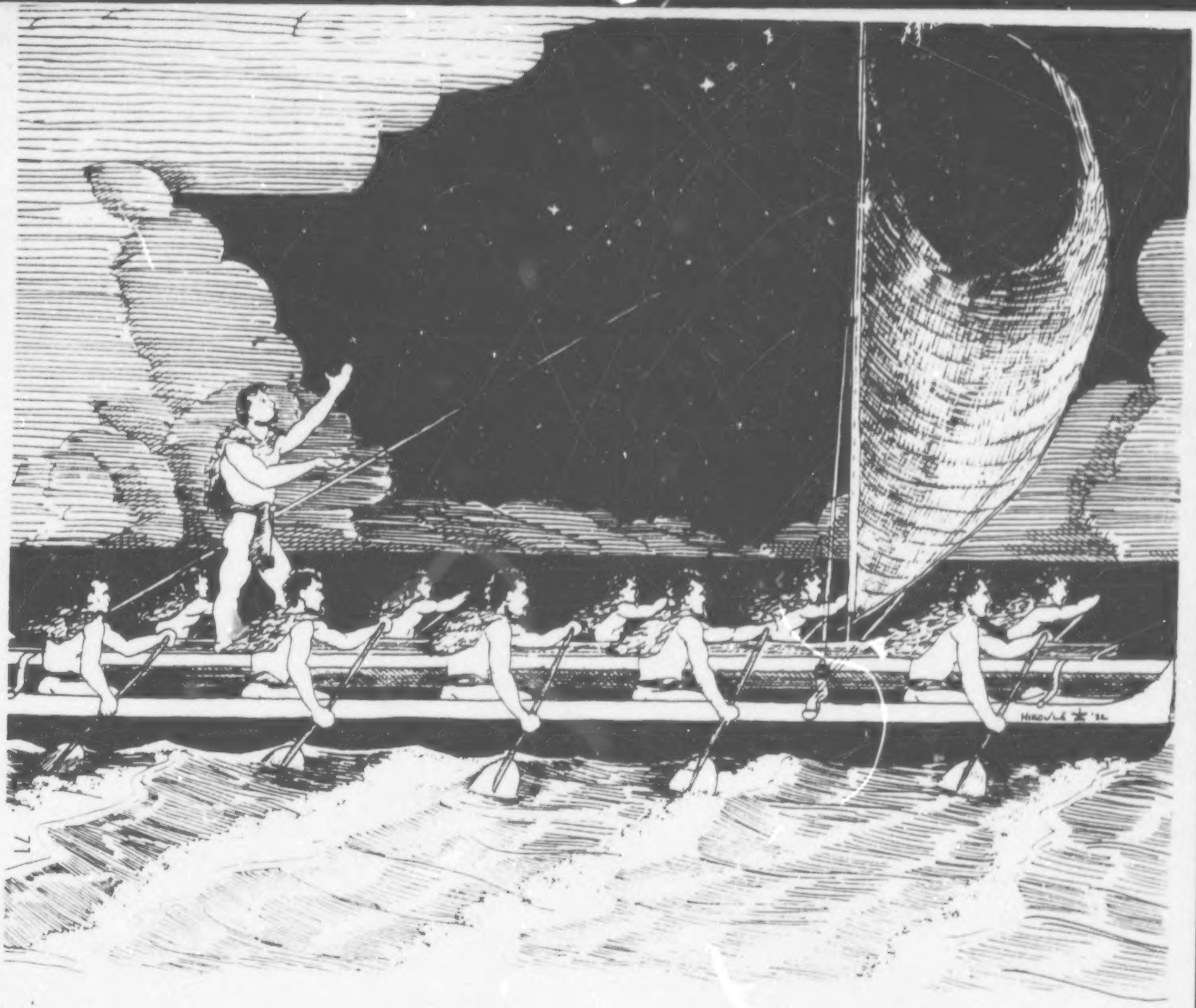
2) How many canoes will be needed to accommodate the class?

3) How many strokes will be paddled on one side of the canoe before changing to the other side?

4) How will paddlers know when to change sides?

5) Who will be ho'okele (navigators)?

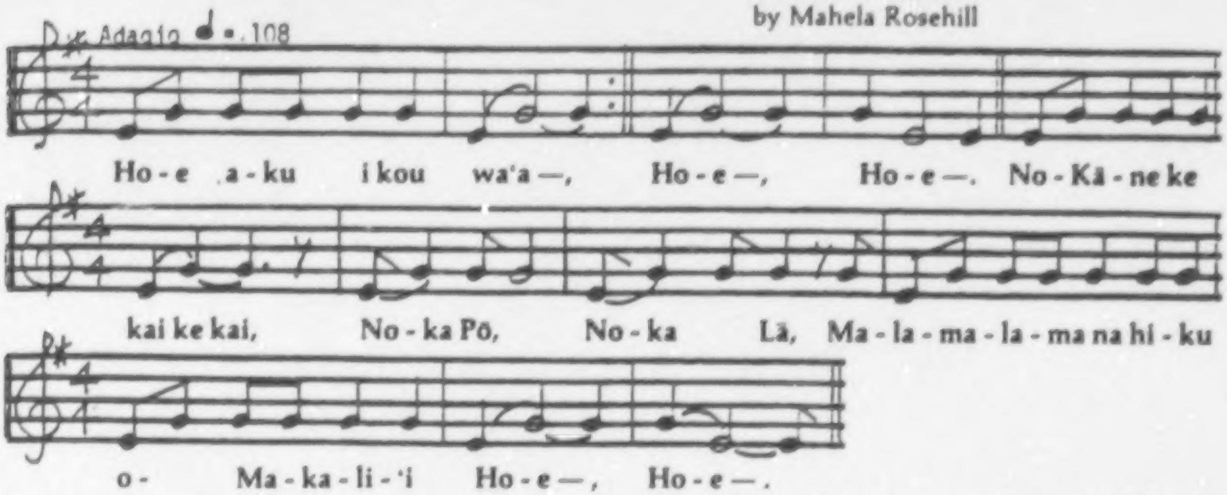
Listen to the music and words of the song to set the mood for the activity. Pay close attention to the phrases and encourage creative paddling motions.



ALAKA'I

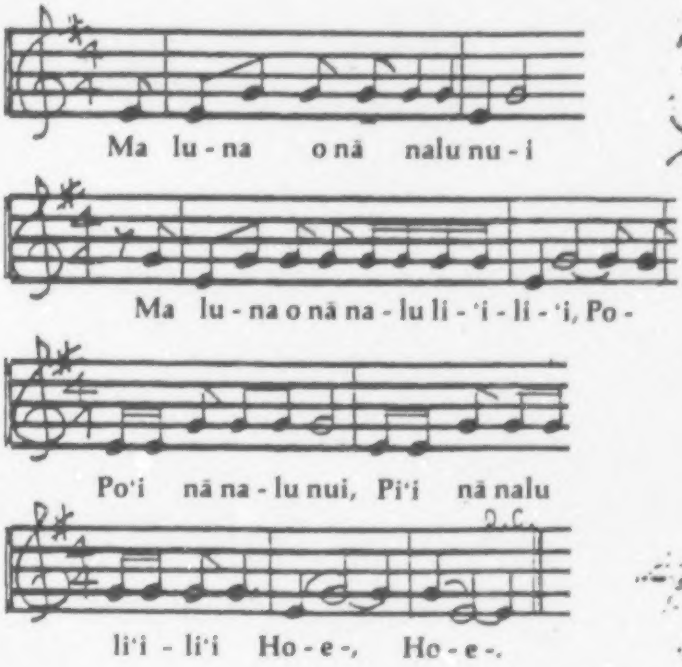
HOE AKU I KOU WA'A

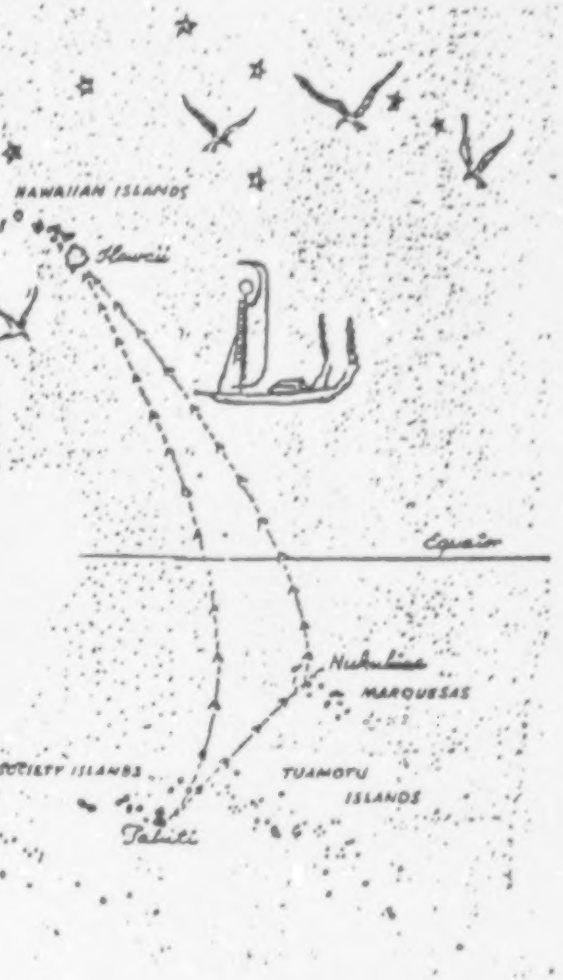
Words and Music
by Mahela Rosehill


Adagio ♩. 108
Ho - e a - ku i kou wa'a —, Ho - e —, Ho - e —. No - Kā - ne ke
kai ke kai, No - ka Pō, No - ka Lā, Ma - la - ma - la - ma na hi - ku
o - Ma - ka - li - 'i Ho - e —, Ho - e —.

Paddle your canoe ahead
For Kāne of the sea,
For the night, for the day,
The bright Pleiades, Paddle.

Over the big waves,
Over the small waves.
Surge—Break—
Paddle, paddle.


Ma lu - na o nā nalu nu - i
Ma lu - na o nā na - lu li - 'i - li - 'i, Po -
Po'i nā na - lu nui, Pi'i nā nalu
D.C.
li'i - li'i Ho - e -, Ho - e -.


HAWAIIAN ISLANDS
Hawaii
Equator
Nukuhiva
MARQUESAS
SOCIETY ISLANDS
TUAMOTU ISLANDS
Tahiti

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CHAPTER 22

NAVIGATION

KENNETH P. EMORY

There is no one with Hawaiian blood in his veins who would be here if it had not been for the knowledge, skill, hardihood, and adventurous spirit of his Polynesian ancestors. They traversed the Pacific, the greatest of all oceans, and came to the hundreds of lovely islands which they first discovered and colonized. They did this at a time when the English were being Christianized and introduced to civilization. Let us consider how they accomplished this, an enterprise that properly should rank among the great achievements of human history, and one that must have been flooded with human drama.

Fortunately, through the researches of the Bishop Museum and other institutions, we do know something of how these islands were peopled. We are sure that the Polynesians are not descendants of survivors of a people who clung to the tops of a sinking continent or sinking archipelagoes, nor is their culture a remnant of a great and ancient civilization that once occupied the middle of the Pacific. They are recent arrivals on the last bits of fair earth to be occupied by man, and they brought with them a heritage of an ancient continental civilization, which they adapted to their new life in the island environment.

The Hawaiians were evidently quite satisfied with their new home, for they gave up long ocean voyaging probably five centuries ago. It became more or less of a lost art with them. Their canoes were descendants of the canoes in which they came originally, and their inter-island travel embodied some of the ancient art of ocean travel. But we have only to go to a very intimately related branch of the Polynesians, the Tahitians and their neighbors, who were making fairly distant voyages up until a few

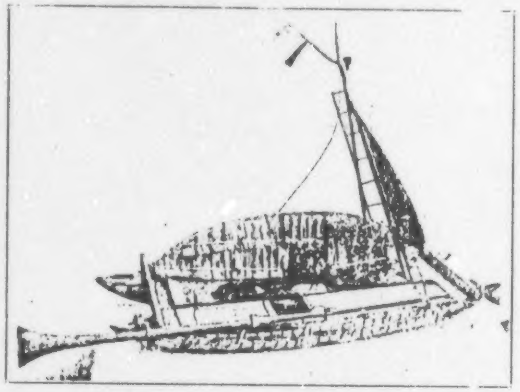
years ago, to judge how the ancestors of the Hawaiian people performed them. Let us consider first the vessels in which the voyages were made, and their equipment; then the preparation for a long voyage, and finally, how the canoes were guided over the ocean.

VESSELS

The Hawaiian outrigger canoes you see today differ very little from canoes seen by Captain Cook. The only difference is that the fore and end pieces of the canoe, manu, are now made out of one solid piece instead of two, and that these end pieces and the board, moo, attached on each side, are now nailed on instead of being lashed on. The lashings of the outrigger of modern canoes are not nearly so neat as those made in the old days. In Cook's day there were much larger canoes, and also double canoes rigged with the Hawaiian sail which went out of existence more than one hundred years ago. The large double canoes, rigged with a mat sail, were quite suitable for inter-island travel. Some very large Hawaiian canoes were made from great California redwood logs which drifted to these shores. The rotting hull of one 108 feet long was still to be seen in the 1870's. The hulls of Hawaiian canoes were always in one piece. The trees, when not redwoods, were carefully selected by the kahuna kālai wa'a who slept in a house in a heiau for a vision to guide him in his choice. A sacrifice of a red fish, of coconuts, and 'awa, was made before the felling of the tree. Ceremonies were performed at every stage in the shaping of the log, of its dragging to the shore, of its building in the canoe shed, and finally at its launching. The canoe was smoothly finished off by rubbing with sand caught in the meshes of coconut husk fiber, or by shark skin. It was then painted black with burnt kukui nut mixed with oil. The trimmings of a royal canoe were painted red.

In Tahiti, hulls of large canoes were made of several sections of hollowed-out log joined together. The stern rose high out of the water and the bow was fitted with

a projecting plank. In the outrigger, the forward boom was not attached directly to the float, but indirectly by means of pegs. The double seagoing canoes were, most commonly, twin canoes. Each was built up of planks carefully fitted and secured in place by sewing with sennit. The seams were caulked with coconut fibre, perhaps soaked with breadfruit gum, and the seams were covered with battens held firmly in place by the sewing. By this means, canoes could be built up to almost any size and could be varied as to shape. The space between the canoes was decked over, and on this deck were set one or two masts and a deck house thatched with pandanus leaf. The sails were narrower and higher than the Hawaiian sail but embodied the same principles.



A Double Sailing Canoe from the Tuamotus

(Model made in 1854, of a canoe then in existence. It was 60 feet long, 14 feet wide, 5 feet 8 inches deep, and carried 60 passengers.)

The Tuamotu double canoes were the finest vessels in the Southeast. They were also built up of small pieces

Ancient Hawaiian Civilization, 1933
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sewn together. They differed from the Tahitian and Hawaiian canoes in being equal-ended so that they could sail in either direction without tacking. This also enabled them to have a permanent cabin in one canoe which would always be on the windward side. The sails were wider than the Tahitian sails and could be lowered and furled. This was a real ship, accomodating comfortably sixty to one hundred persons. Great steering oars or paddles were necessary to hold it on its course.

The Tongan canoes were the finest sailing ships in Polynesia when the Europeans first came upon the scene. They reached the enormous length of 150 feet, nearly twice the size of the trading schooners in the South Seas today. The Tonga double canoe had one canoe very much smaller than the other. The sail, though a lateen, or in other words, a triangular sail, was suspended from the mast by the middle of one side. The end of the mast was fixed on the deck or front of the canoe and when it came to tacking, the sail, not the canoe, was reversed. The Tongan canoe was modeled after the Fijian, the Tongans improving on the Fijian. This Tongan-Fijian canoe was perfected in about the 16th century when the Tongans were securing the central Pacific and penetrating north even as far as Fanning, 1000 miles from Hawaii, where they left two tombs of chiefs.

Canoes were equipped with ordinary paddles, steering paddles, bailers, seats, mat sails, and tassels of feathers or pennants of kapa flying from the masthead or outer end of the sail. Most old Hawaiian paddles were tipped at the end with a midrib on one side. Stone anchors were carried, although in the Tuamotus the usual method of anchoring a canoe was by diving and fastening the anchor to a coral head.

PREPARATION

It is altogether likely that at the height of the colonization period when whole families with their retinues, their household property, their domesticated animals and plants were to be transported, that canoes were built for

the purpose. They were undoubtedly larger and better than any Polynesian craft Europeans have seen in our times, centuries after the period of colonization had come to an end. In preparing for a long voyage, canoes were carefully gone over. They were recaulked and relashed on all weak points and the rigging was overhauled. If the canoes were especially built for the voyage, preparations might extend over many months.

The stores of food and water were the next most important things to attend to. Water was stored in bamboo joints or in gourds or in coconut bottles. Of these, the bamboo could be most conveniently packed away on board. Sweet potatoes, *taro*, bananas, young drinking coconuts, and breadfruit would last a week or ten days and a supply for this period was put in. Yams would last two months. Among other lasting foods were mature coconuts and several prepared foods, such as fermented breadfruit, dried *taro*, dried sweet potato, and dried bananas. Pandanus food was another concentrated lasting preparation taken on a voyage. It was a yellow dough the consistency of putty, and was made by scraping the starch from the base of the keys, mixing it with coconut milk, and baking it. Fresh fish could be kept alive in bamboo aquaria, and shell fish would keep alive a few days. Dried fish was one of the staples of the long voyage. Pigs and chickens were kept alive on copra and the dogs were fed the remains of the pigs, chickens, and scraps of fish. A few birds and fish might be caught at sea to round off the menu. Sand, earth, stones, and firewood were carried for the *imu*.

The Tahitians and the Tuamotuans rarely took more than twenty days' provisions. The Polynesian canoe is a fairly fast sailing vessel. With favorable winds it makes eight or nine knots. It has been estimated that with a fair following wind the great voyage from Tahiti to New Zealand could have been covered in about 11 days, and the Polynesians most carefully chose their weather. Tuamotu natives have been known to wait months at

Tahiti for the right season of the year to return home. In addition to waiting for a perfect day for the start, all omens must be right on that day, and the religious rites attending the departure must be completed.

NAVIGATION

Now, how were the great stretches of water between islands navigated? How was the way back to land found when canoes had been driven away from their islands, or out of their course by storms? We have our best information in answer to these questions from the natives of the Tuamotus. When the natives of Anaa in the Tuamotus set out for Tahiti, 250 miles distant, they dragged their fine twin ships from their neat canoe sheds and hauled them to the edge of the reef flat over the butts of coconut leaves amid their lively hauling chanties. The canoes were lined up with points on shore which gave the exact direction for them to pick up Matavai point on Tahiti and at sunset they took final leave of their friends and launched their canoes. They fixed on the first bright star directly ahead near the western horizon. When it began to sink into the horizon haze they guided on the star following this one. If you stop to think you will realize this is not so easy. The second star would not be directly above the first but slightly off to one side or the other. Here is where the lore of the Tuamotu astronomer came in. He was aware that all the fixed stars which sink on one spot on the horizon arise from one spot on the eastern horizon, and that these two spots never change as long as he remains in one place. These stars follow the same curved course through the sky and are said to belong to the same *rua*, or pit. The principal stars which follow a number of courses in both the northern and southern parts of the heavens were known by name. The Polynesian navigator could recognize and give the name of 150 or more stars and, furthermore, what was of the greatest importance, he knew which belonged to the same parallel of latitude. He did not express it that way, of course, but said instead that they all issued from the same pit.

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If on this voyage to Tahiti, clouds suddenly began to obscure the western sky, a man would be stationed in front and keep a back sight on a star on the eastern horizon, and on the stars following it. If the whole sky became overcast, he fell back temporarily on the slants of the wind and waves. If the heavens cleared he would search for stars on the western horizon known to belong to the same series as the stars guided on when they started.

In black weather or rainy weather at night, a change in the winds would be immediately noted because the waves would not change their direction right away. Winds, also, were recognized as much by their character as by the direction from which they came, so that a native baffled as to his directions could often re-orient himself by recognizing a certain wind. In the knowledge of winds the Tuamotuans were most expert.

In the day time, the sun became the principal guide, supplemented by waves and winds, and in addition, currents. The rippling of the current could be detected by the eyes, and the general trend of currents in particular regions is fairly constant. The direction from which came sea birds roosting on land, or to which they returned at night, was a guide.

Every intelligent Polynesian had a very clear notion of the cardinal points, N., S., E., and W., and of the points midway, and as soon as he could find a wind, or celestial body on which he could right himself, he would know if he was going in the likely direction of his island. A string in which knots were tied each day enabled him to keep good track of the days passed. As Tahiti was neared, usually great piles of clouds indicated where it stood long before it could be seen.

The return from Tahiti to Anaa was a much more difficult matter. The island is not very wide and is so low that a canoe can pass within eight miles in clear weather and not see it. Much greater care had to be exercised in choosing the weather, for Anaa lay to windward and the

favorable winds were rare and occurred only in one season. The shallow lagoon of Anaa in the daytime casts a reflection of a peculiar greenish color on any clouds that pass overhead. We saw this light at a distance of twenty miles and it acted as a beacon to us. I have been told that in rainy weather when coral islands are easily passed by, that a pig on board would be carefully watched. If he got a whiff of land his nose would turn landward. Many such tricks must have been used by the Polynesians.

This story illustrates how the Polynesian navigator made his way back when he was blown far from his island, or course. In 1821, three double canoes left Anaa with 150 natives to pay their respects to the new Tahitian king. Two days out on their course they were met by a gale which scattered them and drove them in the opposite direction for a day and then left them in a calm. When the wind sprang up again one canoe felt its way back to the course but was then surprised by a storm which drove it several hundred miles eastward. The people in this canoe then found themselves becalmed for more than a week during hot, dry days. Their two weeks provisions of water and food gave out and they were exhausted. Seventeen of the twenty-three men, fifteen women, and ten children who sailed on this vessel, died. A rainstorm put a temporary end to their misery. Further heartened by a catch of three sharks, they hunted for land. They finally discovered the tiny atoll of Vanavana, which they found uninhabited. They stayed here ten months preparing for the return voyage. On their way home they stopped at another island and in attempting to land they damaged their canoe. They remained here eight months, repairing the damage and laying in stores of dried fish and pandanus cakes. They were about to embark when Captain Beechey came by and so learned of their adventure. They were well and happy and taking their time to insure a safe return in their unusually small vessel, a double canoe of thirty feet in length.

In exploring for new lands, a fleet of canoes, according to Maori tradition, would spread out in line, each canoe just in sight of another. With land birds ranging fifty miles out to sea, the chances of discovery of an island, by a fleet of five canoes, were very good, if they came within fifty or sixty miles on any side of it, even if it was a very low island.

Knowledge of Polynesian voyages helps us to appreciate the skill and daring of these first explorers and colonizers of the Pacific. At a time when our European ancestors knew little more than the world about the sheltered Mediterranean, our Polynesian ancestors were navigating the greatest of the oceans. And while Columbus and the European navigators of a much later date launched out with fear and trembling into the unknown, these earlier Polynesian navigators knew where they were going and how they were going to get there.

HAWAIIAN SEABIRDS

Hawaiian name	Scientific name	English name
'Ā	Sula sula rubripes Sula leucogaster plotus Sula personata dactylatra	Red-footed booby Brown-vested booby Masked or blue-faced booby
'Ewa'ewa	Sterna fuscata oahuensis	Sooty tern
'Iwa	Fregata minor palmerstoni	Great frigate or man-of-war bird
'Ou	Bulweria bulweri	Bulwer's petrel
'Ua'u kani, Hō'io (obs.)	Puffinus pacificus chlororhynchus	Wedge-tailed shearwater or moaning bird
'Ūlili	Heteroscelus incanus	Wandering tattler
Hunakai	Crocethia alba	Sanderling
Koa'e kea	Phaethon lepturus dorotheae	White-tailed tropic or boatswain bird
Koa'e 'ula	Phaethon rubricauda rothschildi	Red-tailed tropic or boatswain bird
Kōlea	Pluvialis dominica fulvus	Pacific golder plover
Manuokū	Cygis alba rothschildi	White, fairy or love tern
Noio	Anous minutus melanogenys	Hawaiian tern
Pākalakala	Sterna lunata	Gray-backed, bridled, spectacled or gray wide-awake tern

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BASIC FOOD CHART

HAWAII'S HEALTH FOOD GUIDE

Basic IV

I. FRUITS AND VEGETABLES (1 serving)

High Vitamin A Foods

Carrots
Pumpkin or Squash
Sweet potato
Taro leaves
Spinach
Broccoli
Marung-gay
Swamp cabbage
Chinese white stem cabbage
Papaya — Mango

High Vitamin C Foods (1 serving)

Orange
Grapefruit
Papaya
Mango
Guava juice
Pomelo
Tangerine
Orange juice
Limes
Tomato
Cabbage, head
Green pepper
Star fruit
Chinese white stem cabbage
Broccoli
Cauliflower

Other Fruits and Vegetables (2-3 servings)

Peas
Green beans
Bean sprouts
Potato
Taro
Banana
Pineapple
Apple
Avocado
Breadfruit
Peaches
Melon
Egg plant
Poi
Limu
Raisins
Cucumber
Turnips
Alfalfa Sprouts
Lychees
Passion fruit

II. CEREALS AND CEREAL PRODUCTS (4 servings)

Whole wheat bread
White bread, enriched
Cereals
Saimin
Macaroni
Spaghetti
Taco shells
Brown Rice
Enriched Rice
Muffins
Crackers
Corn
Buns — Rolls

III. MILK AND MILK PRODUCTS (2-4 servings)

Fresh milk
Skim milk
1% milk
2% milk
Non-fat dry milk
Evaporated milk
Cottage cheese
Yogurt
Cheese
Ice Cream
Ice milk
Frozen yogurt

IV. MEATS, FISH, POULTRY, EGGS AND DRIED BEANS (2-3 servings)

Beef
Chicken
Pork
Fish
Liver
Egg
Luncheon meats
Sardines
Peanut butter
Dried beans
Tofu
Tuna
Canned meats

(Other) VEGETABLE OILS AND FATS (3 servings)

Margarine
Butter
Vegetable oil
Salad dressings
Mayonnaise
Bacon

Nuts
Coconut
Cream
Whipped cream
Sour cream

Hawaii State Department of Health,
Nutrition Branch.

NUTRITIONAL VALUE OF

BASIC IV FOOD GROUPS

	GROUP I-HIGH VITAMIN A FOODS	GROUP I-HIGH VITAMIN C FOODS	GROUP I-OTHER FRUITS AND VEGETABLES OF ALL KINDS	GROUP II-CEREAL AND CEREAL PRODUCTS
	Leafy, dark green and orange colored vegetables 1/2 cup serving	1/2 cup serving	Two or more 1/2 cup servings	At least one or more serving at each meal.
HOW TO CHOOSE ~	Use spinach, carrots, lūau, pumpkin, broccoli, sweet potatoes The darker the color the better the food value. Eat some raw everyday as a salad.	Use papaya, citrus fruits, tomatoes, guava, mango, melon, cabbage Use high vitamin C juices fresh, canned, or frozen One cup of tomato juice is needed to give the same amount of vitamin C as 1/2 cup of orange juice.	Use poi, taro, breadfruit as you do potato. Island fruits and vegetables are best. Vegetables and fruit may be frozen, canned or fresh. Use in soups, stews, or casseroles.	Whole grain and enriched bread, rice and cereals give the most value for your money. Enriched spaghetti, macaroni and noodle may be used to stretch meat or cheese and egg dishes.
WHY THESE	Vitamin A for healthy eyes, skin, blood and hair and to guard against infection. Iron for building blood. Dietary fiber for good elimination. Other vitamins and minerals.	Vitamin C for strong blood vessels, for healthy gums, for building blood and strong bones and teeth. Dietary fiber Other vitamins and minerals.	Other necessary vitamins and minerals Dietary fiber Energy	Calories for energy. Vitamins and minerals if whole grain or enriched products are used. Vegetable protein which when combined with milk, eggs, cheese and meats will promote growth and health.

FOODS IN HAWAI'I

	GROUP III-MILK AND MILK PRODUCTS	GROUP IV-MEAT, FISH, POULTRY EGGS AND DRIED BEANS	OTHER-VEGETABLE OILS AND FATS
	Adults - 2 glasses Pregnant women - 4 glasses Children - 3 to 4 glasses Teenagers - 4 glasses	Two or more servings Each two ounces Limit eggs to 3 to 4 per week	Three servings or 1 teaspoon at each meal
HOW TO USE	All forms of [illegible] are included: whole, imitation, nonfat dry or evaporated. Skim milk, buttermilk and nonfat dry milk are the same as whole milk except for the fat. Use as a drink and in cooking	Use lean meats, fish and poultry Stretch your meat with dried peas, beans, lentils, and tofu Legumes and tofu are incomplete proteins and are best combined with meats or other animal proteins	Use oils and polyunsaturated margarines Butter, bacon and other animal fats are saturated and high in cholesterol Oils and fats are very high in calories. Limit amount of fat when weight watching.
FOODS ARE RECOMMENDED	Calcium to build and protect bones, teeth and nerves and to regulate muscle action Protein for building blood and growth Vitamins A, D, riboflavin and phosphorus	Protein for growth and body repair Iron for building blood Other vitamins and minerals Fats for energy	Calories for energy Essential fatty acids, vitamin A and vitamin E

Hawaii State Department of Health
Nutrition Branch, 1979

Food for the Athlete

Athletes Need Energy

Food is the Source - You the athlete need special sources of energy. The source is food. Your activity determines the energy you need. Food supplies the energy for short or long term energy. Begin with a good diet and then eat for your special needs.

Energy Needs for Different Sports

Short-Term Energy - Sports like the 50-yard dash, high jump, or pole-vault need quick bursts of energy for a short time. These sports draw on energy already formed in the muscles from food sugars (carbohydrate). It is called ATP (adenosine triphosphate). Only a limited amount of ATP is stored in the muscles.

Getting ready for short-term energy sports requires a good meal with plenty of starchy and sugary foods (carbohydrates) three hours before the event. Fish or poultry, rice or potatoes, cooked vegetables, bread, milk and fruit or fruit juice are good choices. Because fats digest very slowly, deep-fat fried foods, such as tempura, French fries, pastries, or fried chicken, should not be eaten less than four hours before an event.

The athlete should avoid muscular work just before the competition to keep muscle energy high. There should be a break between events to allow the muscle to clear the waste products (lactic acid) of exercise and to restore muscle energy. Drinking about a cup or more of fruit juice is a good way to replace the carbohydrates.

Intermediate Term Energy - Athletic events that need high energy output for a relatively short time, such as gymnastics, diving, tennis, shot-put or golf will use ATP quickly and then draw on muscle sugar (glycogen). Glycogen in the muscle can be increased by eating extra servings of rice, bread, cereals and juices for 2 to 3 days before the competition.

Long-Term Energy - When hard physical exercise is needed for a long time, such as in basketball, football, wrestling, long-distance running, or swimming, soccer, and water polo, glycogen needs to be filled to high capacity in the muscle through a good basic diet rich in carbohydrates. The procedure of muscle sugar (glycogen) loading, which is often used, can be easily abused and should be used only in special events. Some older athletes have experienced heart problems after glycogen loading which can reduce rather than improve athletic performance.

Muscle loading is a way of doubling sugar in the muscles. It is done by physically training and exercising for several days while reducing carbohydrates (starches and sugars) in the diet, followed by two to three days of high carbohydrate intake just before competition. Training is difficult during the low carbohydrate period, because energy must come from fat and protein. These sources of energy are less efficient and may cause the body to hold water, slowing down performance.

Need for Water

Heat stroke, a sudden faint caused by not enough water and hard work is a serious hazard during strenuous exercise. Withholding water from athletes has caused illness and death. When there is loss of water, even a little physical activity causes heart beat and body temperature to increase. Body changes that hurt performance are noticed with small losses of body water. Large water losses are extremely hazardous and lead to heat stroke. If not treated quickly, the individual will die.

There is no reason to stop water intake of athletes during contests nor is there any proof that people can be trained to take less water. Water loss should be replaced by continuous fluid intake. Not eating and drinking for many hours is dangerous.

Hawai'i State Department of Health
Nutrition Branch

MYTHS ABOUT FOOD

1. Added Protein - the hardest myth to do away with is that athletes need added protein. Protein is not a main fuel source of energy. Added protein will not build muscle. The usual American diet provides more than enough protein for athletes.

2. No Fat - another myth is that no fats, no fried food, and no oily dressing should be eaten. The human body needs a certain amount of fat. Fats in the diet are carriers of vitamins A, D, E, and K. (See Daily Food Intakes)

3. Added Vitamins and Minerals - there is no sure information that the intake of vitamins above that in a good diet will improve performance. Poor use of vitamins and minerals may have harmful effects. However, a lack of iron is common in athletic women, particularly during menstruation, and supplemental iron may be helpful at this time.

4. Quick Energy Foods - many athletes believe that sweets eaten just before events will provide extra energy. Since it takes two to three hours for sugar to reach the muscle, this is not quick.

5. Milk - there is no reason for eliminating milk from the athlete's diet. Contrary to some opinion, milk does not "cut wind", cause "cotton mouth," or "sour stomach". It is an important source of high quality protein, calcium and phosphorus, as well as vitamin B_2 (riboflavin). Milk products are among the best snack foods.

6. Salt Tablets - diets in Hawai'i are usually high in salt, making it unnecessary to take extra salt.

7. Water: The human body needs water constantly to function properly. Some of the water is eliminated through the respiratory and digestive process. Some of it is stored in the body and used as needed, such as in times of illness or strenuous exercise. Therefore, water should be consumed while participating in strenuous physical activity lasting more than 20-30 minutes.

"Food for the Athlete" (pamphlet)
Nutrition Branch
Hawai'i State Department of Health

HAWAIIAN VOCABULARY FOR CLOUDS AND WEATHER

Clouds

ao	cloud
ao 'ele'ele	black cloud
ao 'ōnohi	cloud with rainbow colors
ao panopano	thick cloud
aoūli	sky, blue of sky
'ena	opening in clouds
'ōmalumalu	cloudy
'ōpua	billowy cloud

He mau nīnau me nā pane e pili ana i ka manawa

He aha ke 'ano o kēia lā?
He lā maika'i kēia.
He lā makani kēia.
He lā ua kēia.
He lā 'ino kēia.
He lā anuanu kēia.

He aha ke 'ano o kēlā ao i ka lewa?
He ao 'ōnohi kēlā.
He ao panopano kēlā.
He 'ōpua kēlā.
He ao 'ele'ele kēlā.

Weather

anuanu	cold
hu'ihu'i	chilly
'ino	stormy
mahana	warm
makani	windy
pulu	wet
ua	rainy
wela	hot

Some questions and answers concerning the weather

What kind of day is today?
This is a fine day.
This is a windy day.
This is a rainy day.
This is a stormy day.
This is a cold day.

What kind of cloud is that in the sky?
That is a cloud with rainbow colors.
That is a thick cloud.
That is a billowing cloud.
That is a black cloud.

MUSICAL COMPOSITIONS ABOUT *HŌKŪLE'A*

by Māhealani Pescaia

In ancient times chants were composed about places, events and people. They described the beauty found in the surroundings and the lives of people, especially the *ali'i* (chiefly class).

Due to our modern media, newspapers, magazines, films and other methods of recording information, composers do not need to record events in song. However, *Hōkūle'a* and its trip to and from Tahiti brought such excitement and cultural awakening that composers were moved to express their feelings in songs.

Keli'i Tau'ā, one of these composers, wrote many songs, including chants. One of his songs, "*Hōkūle'a*," sung by Nā Keonimana, was used as the background music for a film called "Launching of the *Hōkūle'a*." More of his songs about the famous canoe appear in the popular album, "The Musical Saga of the *Hōkūle'a*." The songs tell about the pride and love for the double-hulled canoe and for the culture it represents. They cover the period from the launching of *Hōkūle'a* in 1974, to various aspects of the 1976 Tahiti voyage and the celebration in honor of the canoe's return.

Larry Kauanoe Kimura, Hawaiian language teacher at the University of Hawai'i, and others were inspired to compose a song called "*Wa'a Hōkūle'a*" prior to talking with Kawika Kapahulehua, captain of *Hōkūle'a*. This song expresses the feelings of the Hawaiian people and their pride in the sailing of *Hōkūle'a*.

Dr. Ruth Tumoana Wahine Finney composed a chant. She was motivated to write this chant the night *Hōkūle'a* was launched.

Prompted by a song contest that was conducted by a radio station in Tahiti, Tahitian composers wrote more than 200 songs about *Hōkūle'a*. The winning song was sung when *Hōkūle'a* arrived in Tahiti, along with several other songs about the historic canoe. The lyrics clearly express the love and feelings of the people of Tahiti for all that *Hōkūle'a* means. The "*Hōkūle'a*" song in Tahitian by the *Hui 'Ohana* also reflects this *aloha*.

John Kaha'i Topolinski, *kumu hula* (*hula* teacher) and Mary Kawena Pūku'i, Hawaiian linguist and cultural expert, composed, and have recorded, a chant that tells of the landing of the canoe in Tahiti. Topolinski's dancers (*Ka Pā Hula Hawai'i*) performed the chant the day *Hōkūle'a* returned to O'ahu.

Hōkūle'a 'Elua crewmember Eddie Aikau wrote "The Song of *Hōkūle'a*" shortly before the 1978 voyage. Eddie will always be a part of *Hōkūle'a*, and his song shows his deep feelings for the beautiful canoe and *Hawai'i nei*. He perished at sea while going for help on a surfboard after *Hōkūle'a* began to founder off Kaua'i.

Many other composers have written songs about the beautiful canoe *Hōkūle'a*. It is likely that other songs and chants will continue to be written about the historic canoe, and the men, women and animals who sailed it to Tahiti, then back to Hawai'i. Thus, the custom of recording events through chant and song continues.

Polynesian Seafaring Heritage, 1980, p. 96
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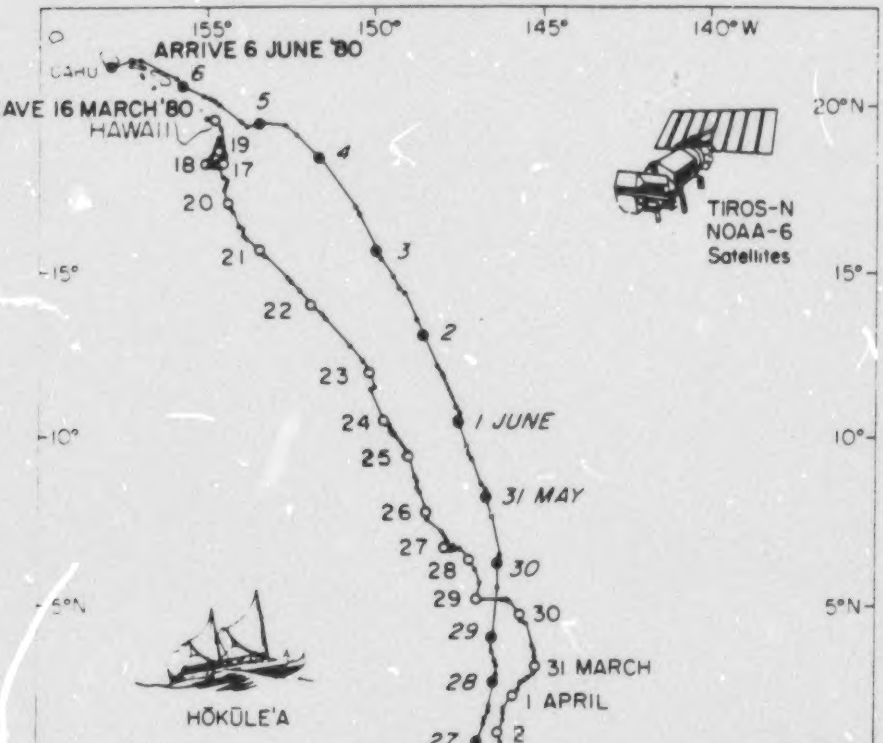
JOURNEY OF HŌKŪLE'A—1980


155°
150°
145°
140° W
OAHU
ARRIVE 6 JUNE '80
LEAVE 16 MARCH '80
HAWAII
20° N
15°
10°
5° N
EQUATOR
5° S
10°
15° S
TIROS-N
NOAA-6
Satellites
HŌKŪLE'A
1 JUNE
31 MAY
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
6
5
4
3
2
31 MARCH
1 APRIL
7
8
9
10
11
12
13
MARQUESAS ISLANDS
TUAMOTU ISLANDS
SOCIETY ISLANDS
COOK ISLANDS
LEAVE 13 MAY '80
ARRIVE 17 APRIL '80
TAHITI

Preliminary track chart of the 1980 Hōkūle'a voyage as determined by the ARGOS satellite platform-location system. Chart prepared at Scripps Institute of Oceanography, University of California at San Diego.

Dates correspond to Greenwich time, ten hours later than Hawai'i/Tahiti local time.

Hōkūle'a, while repeating the ancient treks of Polynesian voyages between Tahiti and Hawai'i, gave oceanographers an opportunity to test systems for satellite tracking of weather buoys through a system developed by Scripps Institute of Oceanography scientists.

A transmitter, used for satellite tracking of buoys as part of a global weather study experiment, was installed on Hōkūle'a and permitted non-intrusive satellite tracking of the canoe on both legs of voyages between Hawai'i and Tahiti.

Valuable engineering information was gained even as Hōkūle'a was being precisely tracked throughout the time Hōkūle'a was at sea.

Dixon Stroup, University of Hawai'i Professor of Oceanography, who is chairman of the Society's Research Committee, was responsible for arranging the Hōkūle'a satellite tracking project in cooperation with Scripps Institute of Oceanography.

While underway Hōkūle'a navigator Nainoa Thompson made voice recordings logging all his decisions relating to navigation judgement on his projection of the canoe's location at any given time.

Data collected during the voyages are being compared with Thompson's recordings. Dixon Stroup is in charge of the research project.

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Grade 4, Unit IV The following lessons were developed to accompany the social studies lessons found in the 4th grade Early Hawaiian Life,

CONTENT AREAS	EMPHASES
SOCIAL STUDIES	Economic Organization: the organization, distribution and use of goods and services. Hawaiian land division - the ahupua'a and the utilization of the resources from the mountains to the sea Interdependence: dependence on one another 'Ohana: The family provided ties of blood, marriage. The family members lived within close proximity to each other.
SCIENCE	Inter-relationships between the various aspects of the natural environment

LEARNER OBJECTIVES	APPENDICES
• Analyzes the relationship between the geographic features, natural resources of the islands and the way the early Hawaiians divided the land. • Describes the system of land division in early Hawai'i. • Explains the importance of the ahupua'a to the 'ohana. • Describes and explains the interdependence of the members of the 'ohana for satisfaction of basic needs. • Describes and explains the role of the ali'i and the maka'āinana in the economic system. • Compares the past and present practices of land utilization. • Compares the economic role of the early Hawaiians and the people of Hawai'i today. • Describes the way of life of the early Hawaiians as a result of adaptation to the environment. • Researches and reports on natural, legendary, and/or historical events which have been commemorated with place names.	See: Appendices of Early Hawaiian Life, pp. 202-247.
• Classifies, within a Hawaiian, scientific, or some individual taxonomy, flora and fauna found during nature study excursions in the different environmental zones on the islands from the beach areas to the uplands. • Describes ethnobotanical uses of plants by the Hawaiians including food, medicine, dyes, shelter, tools, weapons, ornaments, religious and social rites.	

CONTENT AREAS	EMPHASES
LANGUAGE ARTS	Creative dramatics and inquiry into the allocation and utilization of the economic resources of early and modern Hawai'i Correct pronunciation and labeling of land areas
HEALTH	Recreation in early Hawai'i and today

LEARNER OBJECTIVES	APPENDICES
- Describes, using the food exchange system within the ahupua'a as a case study, how 'ohana and community members were dependent upon one another in Hawaiian society during former times. - Recognizes that the Hawaiian food exchange system was based on sharing and giving and receiving, instead of trade or barter, which stemmed from motives of practicality, sympathetic interest in general welfare of the scattered 'ohana and as a matter of self-respect. - Explains using both ancient and modern Hawai'i as a case study, how economic resources are allocated and utilized to satisfy the people's basic needs and wants. - Discusses the food exchange system, the necessity for cooperation and working together on individual projects such as home-building, and the pulling together of the community in large numbers to provide labor for the chiefs and konohiki for large-scale projects. (kōkua, laulima, alu like, lōkahi) - Imitates with correct pronunciation the Hawaiian words, expressions and phrases modeled by the teacher or kupuna.	
- Recognizes ways in which the Hawaiians used their time to meet their needs for recreation and relaxation. - Compares the early Hawaiian use of free time with activities in modern Hawai'i.	

197

198

CONTENT AREAS	EMPHASES
MUSIC	Songs of the islands Songs of specific places on various islands "Ku'u Home O Nā Pali Hāuliuli" (Kāne'ohe on O'ahu) "Kupa Landing" (Ho'okena on Hawai'i) "Kilakila 'O Haleakalā" (Haleakalā Mountain on Maui) "Hilo Hanakahi" (Hilo on Hawai'i)
ART	Collage: Using native materials of the environment to compose an artistic representation of the flora in an ahupua'a
FOOD AND NUTRITION	Food plants of early Hawai'i - uses, methods of planting, nutritional values, medicinal value
GAMES AND SPORTS	Hawaiian games for recreation and building skills

LEARNER OBJECTIVES	APPENDICES
• Relates how aspects of the natural Hawaiian environment provided images and topics for the composers of Hawaiian poetry (mele) in former times and even today. • Recognizes that selected words and expressions found in chants and songs that have been learned can be incorporated into the student's active or passive vocabulary. • Creates melodies and lyrics concerning a Hawaiian theme using English and Hawaiian words, expressions, and phrases. • Sings selected Hawaiian songs introduced by the teacher while playing rhythmic or harmonic instruments ('ukulele, guitar or auto harp) in time with the beat.	
• Composes artistic expressions through the use of native flora.	
• Discusses how common Hawaiian foods are grown or produced and acquired. • Discusses the kinds of plants that grow in the different environmental zones from the seashore to the mountains. • Discusses some of the beliefs and kapu connected with fishing.	Unit IV - A Worksheet for Plant Research, p. 97 - B Nā Mea Kanu: Polynesian Introduced Economic Plants, pp. 98-105
• Creates new Hawaiian games using the native materials of the environment.	

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The following lessons were developed to accompany the lessons found in the 4th grade social studies guide, Early Hawaiian Life, pp. 71-78,

Grade 4, Unit IV

SCIENCE

- Activities to stimulate the children's interest in the inter-relationships between the various aspects of the natural environment.

1. Plan a field trip to an area that has maintained the characteristics of an ahupua'a.

E.g. O'ahu - Moanalua Valley
Moloka'i - Halawa Valley
Kaua'i - Hanalei
Hawai'i - Pololū Valley, Wai'ōhinu
Maui - Kahakuloa
Lāna'i - Kaunolū, Keōmuku

a. Call and make arrangements for an all day field trip to the valley.

b. Inquire about a preparation program wherein an instructor can come discuss the interrelationships between various aspects of the natural environment,

e.g. Geology (volcanic action, erosion, weathering, water systems)
Weather (climate)
Native biota (plants/animals)
Environmental zones (ahupua'a)

and the cultural history of Hawai'i as related to the 'āina (land).

c. O'ahu: Call Moanalua Gardens Foundation, 839-5334 for arrangements and learning materials.

LANGUAGE ARTS

Refer to Early Hawaiian Life, p. 79.

- The following language lessons may be used to stimulate the children into dramatizing and writing about the Hawaiians' solution to meeting their basic needs within the ahupua'a.

Give each child his/her own island map.

See: Nā Ki'i Ho'ona'auao Teacher's Guide for 8½" x 11" master copies.

1. Have the children sketch in the various divisions of land.

2. Introduce each division, have them write it correctly and spell it on their maps. Using the diagram on p. 79, have them also write the ruler of each division. Emphasize the use of diacritical marks. The correct pronunciation of these words may be given by the kupuna.

3. Writing

Have the children imagine themselves living in a kauhale under a konohiki, (chief) of an ahupua'a. Have them describe the chief and how he rules his people. Encourage them to include his treatment of children as well as adults, his characteristics and his family.

4. Learn about the different land areas by name and description.

HEALTH

- Activities to help the children become more aware of the healthful physical activities of the children in an ahupua'a.

1. Discussion

Tell children: Imagine yourselves living in early Hawai'i without TV, radio, movies, books, bicycles and other modern day amusements.

a. What would you do to entertain yourself?

b. What do you do today at different times of the day to entertain yourself?

Write the children's responses on a chart.

	Activities/Entertainment		
	Morning	Afternoon	Night
Early Hawai'i	Help with chores Receive training	Swim Participate in skill bldg.games	Tell and listen to stories
Modern Hawai'i	Attend school	Participate in school organized games	Do homework Watch TV

2. Plan some activities that would show other uses of the free time of the children. Have the children share some of the most exciting things they do at home. Make up a list of these activities for each student to have. Encourage them to make better use of their time by being creative rather than watching TV.

"Land Division."

MUSIC

- Music activities to build up the children's vocabulary and repertoire of songs about the natural Hawaiian environment utilizing the 'ukulele and autoharp.

Teach the students songs about their island and/or the town or area in which they live. Use the 'ukulele and autoharp as accompaniment.

1. E.g. Island songs

   Māhoe. E Hīmeni Hawai'i Kākou

   Kamehameha Schs. Ho'omāka'ika'i/Explorations

   Use the Nā Ki'i Ho'ona'auao charts for place names.

2. "Sweet Lei Hinahina" can be taught to the children as an island song by substituting the flower and island in the last line.

   E.g.: Sweet lei hinahina
   Sweet lei hinahina
   Sweet lei hinahina
   Ka moku 'o Kaho'olawe.

   For the island of O'ahu
   Sweet lei 'ilima
   Sweet lei 'ilima
   Sweet lei 'ilima
   Ka moku 'o O'ahu.

   etc.

ART

- An activity in art to motivate the children to be more observant of their natural environment.

Draw a diagram of a typical ahupua'a. Define the boundaries - which should be natural features such as ridges, depressions, stream beds, homes of birds, a line which separated grass from lava, or piles of rocks.

Collage

Encourage the children to begin collecting a variety of plant materials from the various land areas.

E.g. From the kahakai area, collect coconut leaves, husk, limu, seashells, etc.

From the kula lands one can bring in kalo (taro, 'uala (sweet potato), and 'ulu (breadfruit)

From the uka lands one can bring in ferns, koa leaves, feathers, etc.

Compose a mural of an ahupua'a using a collage of various plants and materials from the environment.

FOOD AND NUTRITION

The following activities can be used along with the simulation lesson in Early Hawaiian Life, p. 84.

- Continue the study of the plants brought by the early Hawaiians by doing a more detailed study of their value as a food and of their general uses.

1. Have each student select one plant to study thoroughly, including nutritional value, kapu, method of planting.
2. Discuss the format of the research - the general outline of information to be researched. See Appendix Unit IV-A, p. 97 for sample.
3. Encourage each student to bring in samples of their plants and label the parts that were used. Have them set up a display using a variety of media.
4. Bring in resource speakers who are knowledgeable in the uses of the plants.

GAMES AND SPORTS

- The following activities are designed to encourage the children to think about the variety of land formations within an ahupua'a and to suggest possible games and sports the children may have engaged in.

E.g. kī (ti) leaf sliding
swimming
spear throwing
etc.

1. Decide on a location on the school grounds and plan some early Hawaiian games.
2. Have the children think about what was available in the environment at the time and have them create games using the materials from the environment.
3. Write the game instructions on 5" x 8" cards.
4. Have each student teach his/her game to the rest of the class. If possible, have the entire class participate in the games.
5. Use the following references for more Hawaiian games:
   a. Dunford. The Hawaiians of Old, pp. 1[illegible]-169.

SCIENCE

2. Other activities dealing with the study of the environment.

   a. Make a drawing which shows the plants that grew or were raised in the different sections of the ahupua'a. Name the plants and indicate what they were used for.

   b. O'ahu students can visit Makapu'u Beach Park. It is an excellent outdoor laboratory of a Hawaiian ecosystem with ocean, lava, sand dunes, tidal pools, offshore islands, birdlife and native coastal plants.

   c. Research and discuss the pollution of Kāne'ohe Bay or other polluted areas known to students, and suggest ways to protect the environment.

   d. Have older persons or grandparents share their experiences about the physical environment of Hawai'i when they were young. Have them describe the flora and fauna, their activities, the road system, transportation and educational opportunities.

LANGUAGE ARTS

a. Ko Kahakai - land by the sea, not favorable for planting

b. Ko Kula Kai - plains or sloping land toward the sea

c. Ko Kula Uka - plains or sloping land toward the upland

d. Kahawai - place having fresh stream water

e. Wao - wild, inland, forested region

f. Kuahiwi - mountain or mountain range

Reference: Handy. Native Planters of Old Hawai'i

5. Discussion

   Ask:

   a. If you lived near the ocean and needed products from the mountains, how would you meet your needs?

   b. If your hale (houses) were built in the mountain area, how would you obtain products from the sea?

6. Have the children dramatize their solutions.

HEALTH

3. Have the children keep a two-week journal of their activities. Hold evaluation sessions with the children to keep them motivated about making better use of their free time.

MUSIC	ART	FOOD AND NUTRITION	GAMES AND SPORTS
3. Other songs: "Ku'u Home O Nā Pali Hāuliuli" (Kāne'ohe) "Kupa Landing" (Ho'okena) "Kilakila 'O Haleakalā" (Maui) "Hilo Hanakahi" (Hawai'i) All these songs are in Elbert and Māhoe. Nā Mele o Hawai'i Nei. "Ke One Kaulana O Hawai'i" describes the various districts on Hawai'i. Source: Hi'ipoi I Ka 'Āina Aloha, LP, Hula Records, Edith Kanaka'ole. 4. Ask community resource people for songs about your locality. Encourage their participation in teaching the songs to the children. 5. Have the children think about the beautiful sights in their town such as the surf, the mountains, the plants or significant fish ponds, etc. Have them write their descriptions in poetry form. Have them make up melodies for their poems and tape these. They may be set to notation by you or the music resource person in your district.	The children should be able to add on new things as the year progresses.	5. Visit an arboretum or medicinal garden on your island. Invite a kahuna lā'au lapa'au or ethnobotanist to your classroom to talk about plants used in early Hawai'i. Resources: Appendix Unit IV B, pp. 98-105 Culture Studies: Hawaiian Studies Project, Data Cards Department of Health. Foods Used in Hawai'i Dunford. The Hawaiians of Old Kamehameha Schools. Ho'omāka'ika'i/Explorations, 1980 or 1981 Krauss, Beatrice. Ethnobotany of Hawai'i Tuttle. Hawaiian Herbs of Medicinal Value (Akaiko Akana)	b. Mitchell, Donald. Hawaiian Games for Today c. Mitchell, Donald. Resource Units in Hawaiian Culture

LANGUAGE ARTS

7. Writing

Have the children write a paragraph about how the Hawaiians solved these problems since travel was by foot and the journey long and arduous.

References:

Handy. Native Planters of Old Hawai'i

Hazama. The Ancient Hawaiians

7. Examine how economic resources are allocated and utilized to satisfy the people's basic needs and wants.

Establish the basic needs of people. Ask the children:

a. "What are the basic needs that must be met in order for people to survive?"

b. "How are these needs being met today?" Discuss.

c. Predict: How were these same needs met in early Hawai'i?

d. Creative dramatics

1) Divide the class into two 'ohana. Having established the basic needs, have one group dramatize how the needs are being met today, and the other group: how the needs were met in early Hawai'i.

LANGUAGE ARTS

2) Discussion: Encourage the children to ask questions about the dramatizations and to think about those factors that enable people to satisfy their basic needs.

E.g. Early Hawai'i. Some of the factors that enabled an 'ohana to build more houses than another 'ohana were:

a) More available land

b) More hands to help

c) Availability of materials

d) More people living in the kauhale

Modern Hawai'i

a) Investments

b) Many families own or rent and live in single family homes

c) Availability of money

etc.

3) Follow up with research and reporting. Talk about the integral role of the 'ohana concepts in this economic process.

LANGUAGE ARTS

References:

Curtis. Life in Old Hawai'i

Dunford. The Hawaiians of Old, pp. 32, 53, 83, 105

Hazama. The Ancient Hawaiians

- For additional language activities, see Early Hawaiian Life, p. 86.

Worksheet for Plant Research

Common Name: ____________________

Hawaiian Name: ____________________

Scientific Name: ____________________

Origin: ____________________

Where does it grow today? ____________________

____

How was it cultivated? ____________________

____

____

Uses:

Food: ____________________

Medicine: ____________________

Religion: ____________________

Others: ____________________

____

Nutritional Value: ____________________

Varieties: ____________________

NĀ MEA KANU

POLYNESIAN INTRODUCED ECONOMIC PLANTS

Ho'omāka'ika'i/Explorations 1981 - Reprinted with permission of the Kamehameha Schools/Bernice P. Bishop Estate

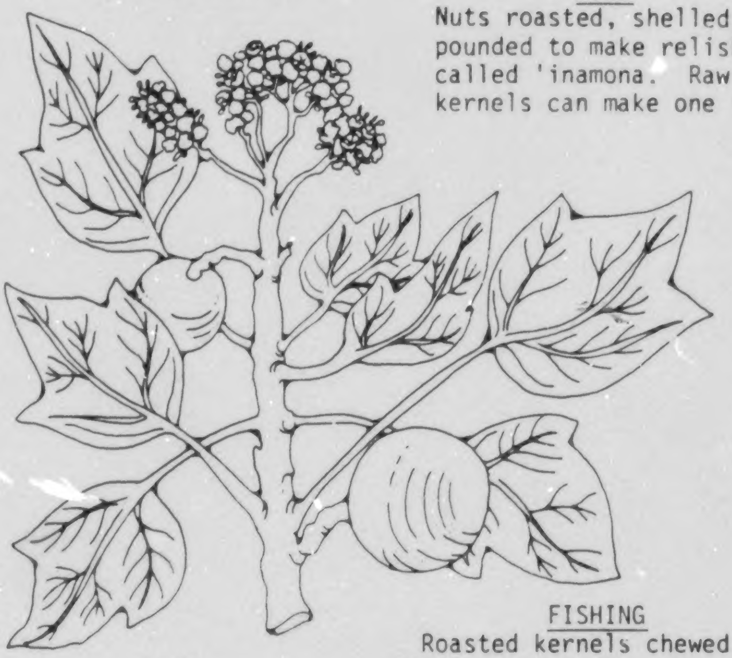
Kukui

DYE OR STAIN

Green husk of fruit pounded with water for pale gray dye.
Soot from burned nuts for black dye for tatooing, for painting hulls of canoes, for kapa.
Inner bark pounded with water makes stain for fish nets and reddish-brown dye for kapa.
Dressing of oil from kernels applied as finishing process on surfboards.

MEDICINE

Sap from green fruit rubbed in child's mouth for thrush ('ea). Sap put on skin wounds hastens healing. Mixture of flowers and sweet potatoes eaten for 'ea. Leaves used as poultice for swellings and infections.



LEI

Hard shells of nuts polished and strung into lei.

FOOD

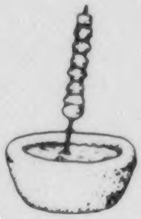
Nuts roasted, shelled, and pounded to make relish called 'inamona. Raw kernels can make one ill.

FISHING

Roasted kernels chewed by fishermen and then spat over the water to make it smooth and clear. Wooden floats for fish nets made of kukui wood if hau wood was not available.

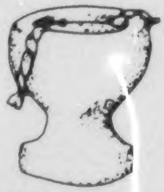
ILLUMINATION

Kernels of nuts were important because of quality & quantity of oil.



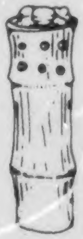
IHOIHO KUKUI

Candle formed by stringing roasted or dried kernels on short coconut midrib or splinter of bamboo and placed in sand in stone bowl. Each kernel burned 2 to 3 minutes.



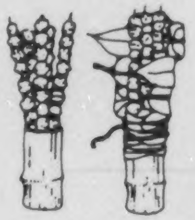
POHO KUKUI

Stone lamp filled with kukui nut oil using twisted strip of tapa as wick.



LAMA

Small torch made by stuffing hollow of bamboo with roasted kernels.



LAMA KŪ

Large torch made of kernels strung on several midribs which were wrapped in dried ti leaves and placed at tips of bamboo handles.

BEST COPY AVAILABLE

Kalo

MEDICINE

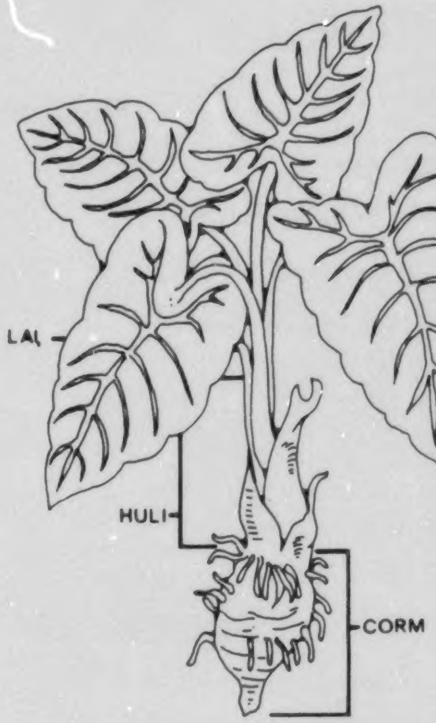
Raw leaf stem rubbed on insect bites to relieve pain and prevent swelling. Raw rootstock rubbed on wound to stop bleeding. Undiluted poi used as poultice on infected sores.

PASTE

Poi was used as paste to glue pieces of tapa together.

FISHING

Grated raw corm used as a bait for fish: 'ōpelu.



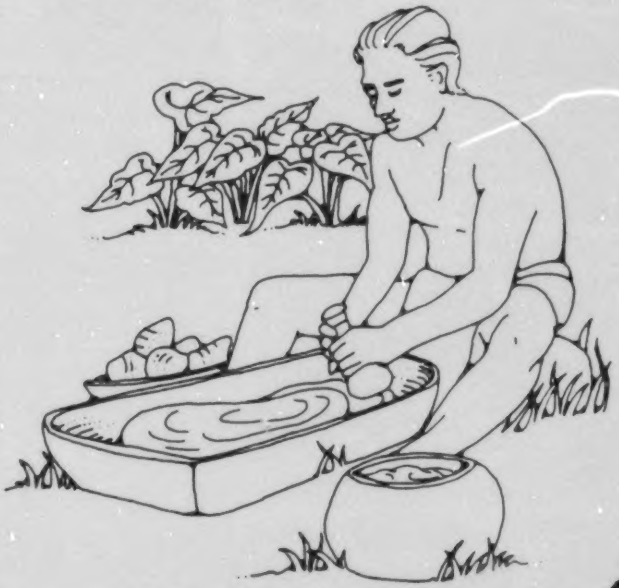
FOOD

Corm cooked in imu, peeled, and eaten. Poi most important starchy food--made from corm cooked, peeled, and pounded into a thick paste called pa'i 'ai. When water is added, the thinner paste is poi. Cooked corm sliced and dried for long trips.
Kūlolo--a pudding made by cooking grated raw corm with grated coconut meat and milk. Young leaves called lū'au--cooked with pork in imu (laulau). Leaf stems peeled, cooked for greens. Corm also used to fatten pigs.

DYE

Juice from poni variety yielded rich red dye used for dyeing kapa. Also 7 other varieties used for dyes.

275 to 300 varieties known to early Hawaiians.



"HUKI I KE KALO"

Huki i ke kalo (Pull the taro)
Huki, huki mai.

Ku'i i ke kalo (Pound the taro)
Ku'i, ku'i mai.

'Ai i ke kalo (Eat the taro)
Mā'ona mai
Mm - mm - mm

Mai'a

FRUIT

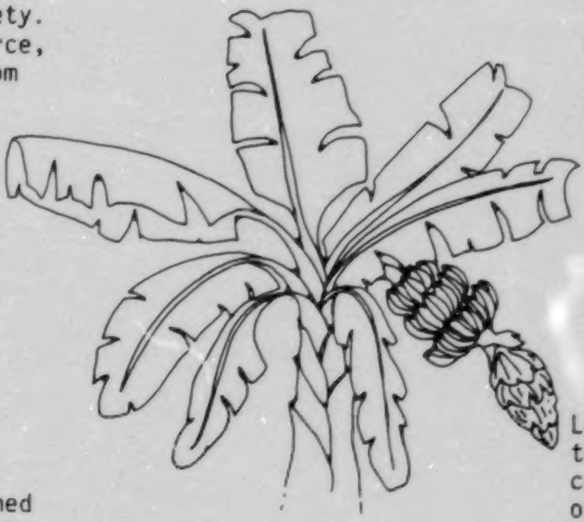
Eaten raw or cooked, depending on variety. When taro was scarce, a poi was made from mashed bananas.

LEAVES

Leaves used to cover food that was placed in imu. Also used to make temporary sandals.

TRUNK

Used as rollers to move canoes. Crushed and placed in imu to create steam. Used as target for spear practice.



More than 70 varieties known to the early Hawaiians.

MEDICINE

Honey secretion from tip of flower fed to babies for vitamins. Juice from roots of certain varieties used for thrush ('ea).

DYE

Dye made from juice of buds.

RELIGION

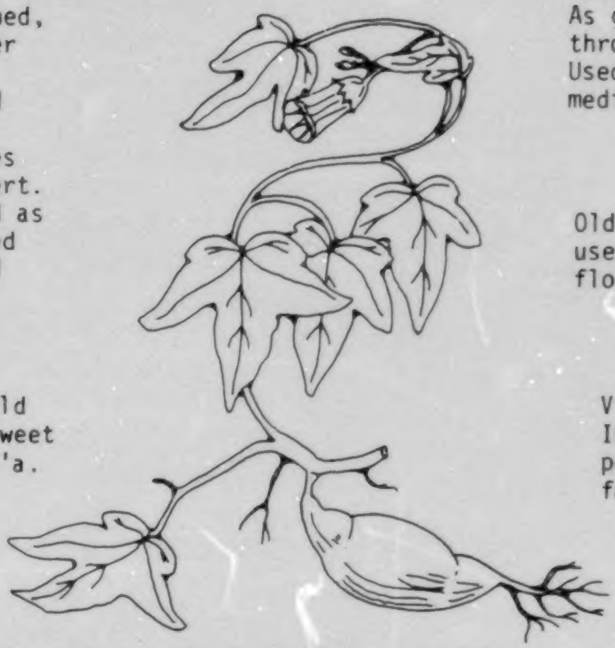
Leaves sometimes used to cover small shrines called unu. Fruit were offerings to gods. Bodies of kings wrapped in leaves.

'Uala

FOOD

Tubers baked in imu and eaten. Also baked, peeled, mashed, and mixed with water to make poi. Grated tubers mixed with coconut milk, wrapped in ti leaves and baked for dessert. Young leaves cooked as greens. Tubers used to make a fermented drink.

230 varieties in old Hawai'i. God of sweet potato was Kamapua'a.



MEDICINE

To induce vomiting Asthma cure. Laxative. As gargle to clear throat of phlegm. Used in various medicinal mixtures.

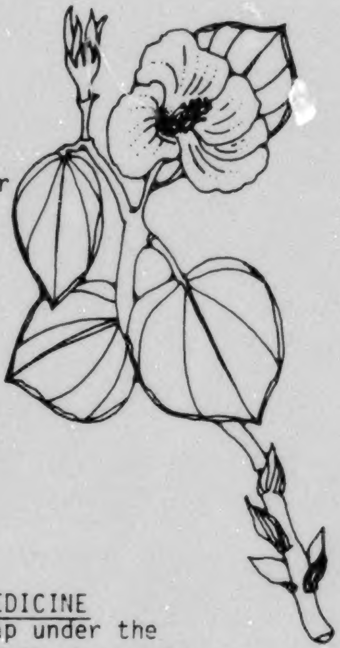
FLOORING

Old vines and leaves used as padding under floor mats.

HOG FOOD

Vines and leaves. Inferior tubers and peelings for final fattening.

Hau



BRANCHES

Slightly curved branches used for outrigger booms. Also used for outrigger float if the lighter wiliwili wood was not available.

Smaller branches used for
- adze handles
- massage sticks
- fire plows
- lightweight spears for battle practice
- fish net floats
- kite framework

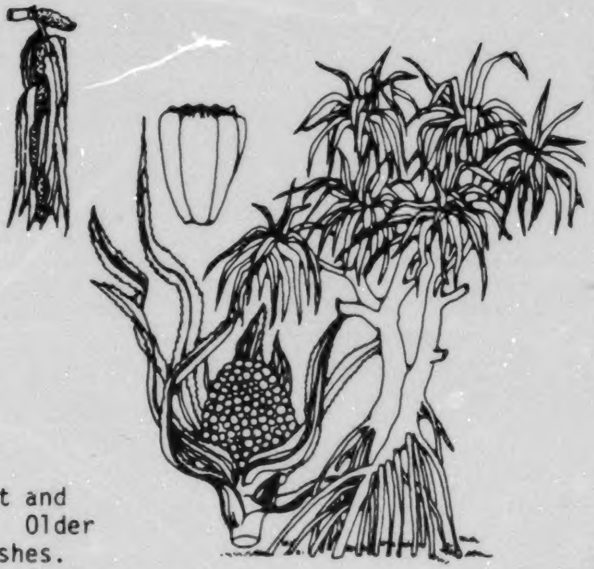
MEDICINE

Slimy sap under the bark and the base of the flower is a mild laxative. Also given to women in labor to help delivery of baby.

INNER BARK

Twisted or braided into cordage for
- support for water-holding gourd
  to fasten covers of lau hala baskets
- for snapping line design on kapa
- to sew kapa bed sheets together
- for making nets when olonā was scarce
- sandals
- ropes
- string for bow
- slings

Hala



MALE FLOWER

Leaves (bracts) used for finest garments. Pollen used as love charm and talcum.

MEDICINE

Tips of aerial roots eaten raw or cooked for medicine.

FRUIT

Near-ripe fruit cut and used to make leis. Older fruit used for brushes. Eaten in time of famine.

LAU HALA (LEAVES)

Plaited for mats,
canoe sails,
baskets, fans,
pillows, kites,
sandals.
Thatching for roof
and sides of
house.

TRUNK

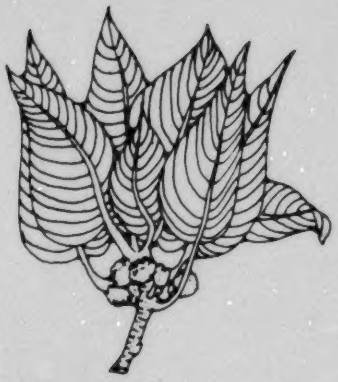
Trunks of male trees are hard through to the core--used for posts and 'ūkēkē.

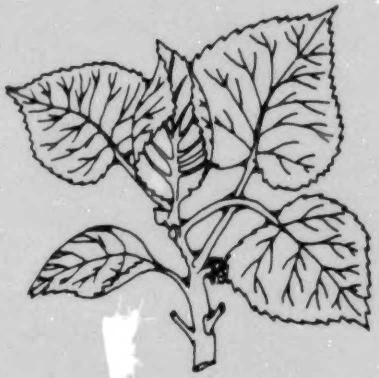
Olonā

CORDAGE

Fiber from inner bark was twisted into a strong cordage for:

- fish nets and lines
- nets for carrying containers (kōkō)
- net base for ti-leaf rain capes, feather capes, cloaks, and helmets
- tying adz heads to hau handles
- repairing cracks in gourd and calabash containers





Wauke

KAPA (TAPA)

Inner bark made the softest, finest, and most durable kapa known. Kapa made from wauke was washable.

ʻŌlena

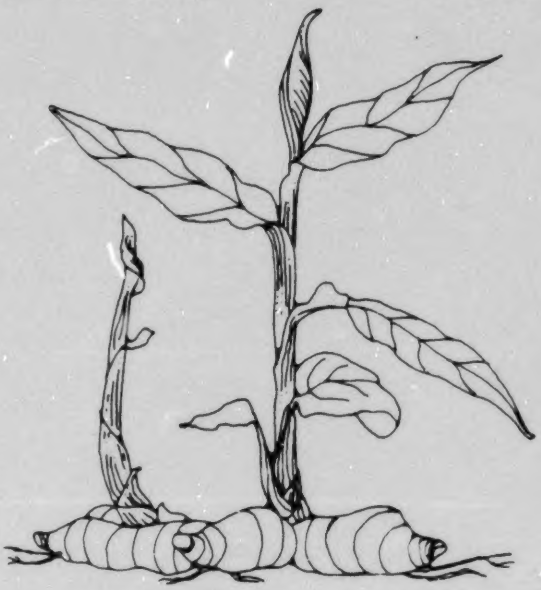
Turmeric. Member of ginger family with spicy yellow roots. Leaf stalks come up in spring; plant dies down in fall.

DYE

Juice from raw root makes yellow dye, a favorite. Juice from cooked root makes deep orange dye. 'Ōlenalena means "yellow" or "dye made from 'ōlena plant."

MEDICINE

Juice from crushed root dropped into ear to relieve earache; into nostrils for sinuses.



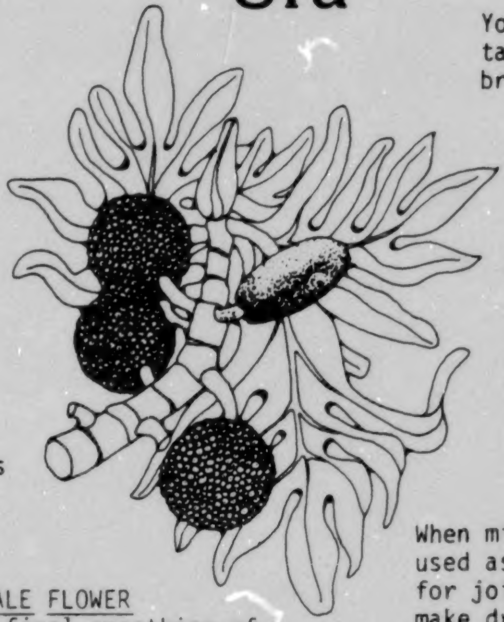
'Ulu

FRUIT

Good source of starch & Vitamin B. Baked in imu. Made into poi. Used for pudding. Used to fatten pigs.

TRUNK

Drums (pahu). Surfboards because of lightness of wood. Poi boards. Woodwork in houses. Canoe bows and stem pieces.



SHEATH OF MALE FLOWER

Used as sandpaper in final smoothing of utensils, polishing bowls, and kukui nuts.

DYE

Young male flower makes a tan dye. Old one makes a brown dye.

MEDICINE

Latex used for certain skin diseases. Leaf buds used for cure of thrush ('ea).

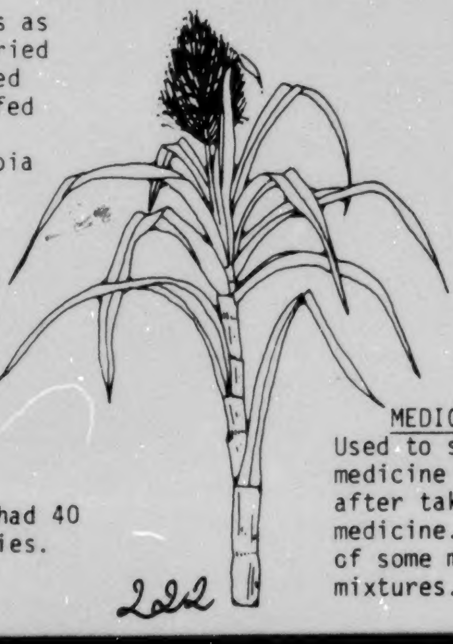
LATEX

When milky sap solidifies, used as chewing gum. Glue for joining two gourds to make drum. Caulking to fill seams of canoe. Used to catch birds so feathers could be removed.

Kō

FOOD

Stalk chewed between meals as a sweet food. Stalks carried on long journeys and chewed for quick energy. Juice fed to babies. Juice used to sweeten puddings like haupia and kūlolo.



Early Hawaiians had 40 different varieties.

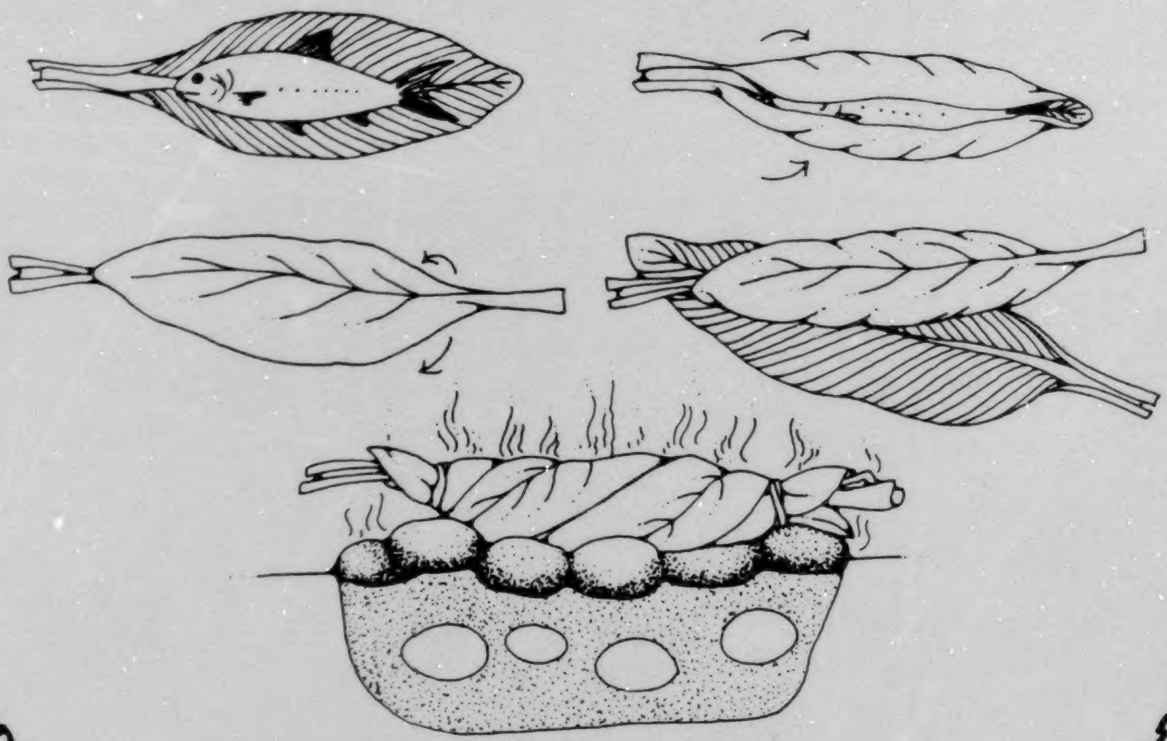
LEAVES

Often used as covering for inside walls. Used to thatch shelters if pili grass was scarce.

MEDICINE

Used to sweeten medicine or chewed after taking medicine. Ingredient of some medicinal mixtures.

HE HANA LĀWALU



Pia

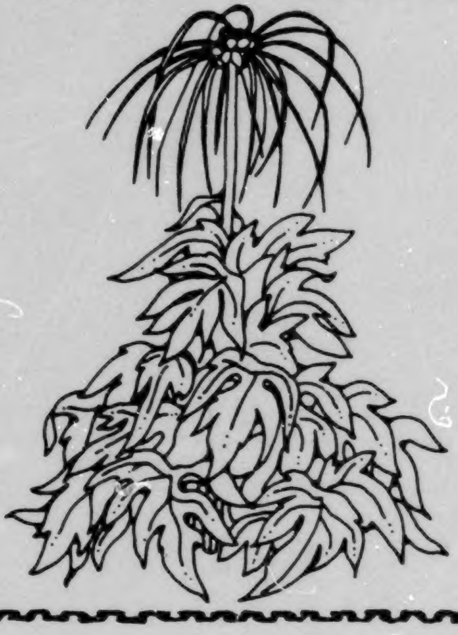
Starch obtained from tuber was the only part used.

MEDICINE

Raw (in water) for diarrhea.
Mixed (with red-colored, high-iron-content clay - 'alaea for dysentery.

FOOD

Mixed with coconut milk, wrapped in ti leaves, and steamed in imu to make a pudding called haupia. Recipe brought by Tahitians.



Grade 4, Unit V[a] The following lessons were developed to accompany the social studies 4th grade guide, Early Hawaiian Life, pp. 97-103,

CONTENT AREAS	EMPHASES
SOCIAL STUDIES	'Ohana: The extended family system of early Hawai'i was important in the socialization of its members Hawaiian family concepts included: Aloha - love Lōkahi - harmony Laulima - cooperation Kuleana - responsibility Kōkua - help 'Ike - recognition Ho'oponopono - setting things right
SCIENCE	Kaiāulu (society): A group of people living and working together Study of the honey bee and ant as "society" insects
LANGUAGE ARTS	Reading legends dealing with 'ohana activities and roles Discussing genealogies of early Hawaiians and modern day people Planning movie rolls of family roles Creative writing on "Life as an Apprentice Under a Kahuna"

LEARNER OBJECTIVES	APPENDICES
• Compares early Hawaiian family life to the student's family life. • Describes the differences between the generalized education for living and specialized training that children in early Hawai'i received and the kinds of education a child in modern Hawai'i receives. • Describes the functions of a family of early Hawai'i and compares them to the functions of today's family. • Explains the importance of roles in the early Hawaiian kauhale (compound). • Explains the role of the 'aumākua (family guardian spirits) in the lives of the people. • Practices the early Hawaiian concepts of aloha, alu like, kuleana, kōkua, 'ike, laulima and lōkahi.	See Appendices I-V of Early Hawaiian Life I 'Ohana, pp. 202-203 II Story of Hāloa, p. 204 III Children of the 'Ohana, pp. 205-206 IV Concepts of Self and Ohana, pp. 208-224 V Ho'oponopono, pp. 225-227
• Identifies groups of people and groups of animals that live together as sociables and explains the importance of the Hawaiian 'ohana concepts even in other "societies." • Identifies some flora and fauna of Hawai'i with the common name as well as the Hawaiian name.	
• Reads Hawaiian legends and identifies 'ohana concepts and cultural roles of people. • Analyzes early Hawaiian genealogies and identifies the importance of correct memorization in order for them to pass from generation to generation without errors. • Writes creative legends based on knowledge of early Hawaiian life.	Unit V^a - E The Hawaiian Chant, p. 120

Grade 4, Unit V[a]

CONTENT AREAS	EMPHASES
HEALTH/FOOD AND NUTRITION	'Ohana concepts (in-depth) and how they help build stronger inter-relationships
MUSIC	Songs by modern day composers dealing with 'ohana concepts "Aloha" by Irmgard Aluli "Alu Like" by Haunani Apoliona Composing original melodies Accompaniment instruments: 'ukulele, autoharps, and guitars
ART	Painting with tempera using wet-on-wet method to express feelings about 'ohana Movie roll/crayons - illustrations for creative stories
GAMES AND SPORTS	'Ohana recreation Papa Hua'ōlelo - "Word lists" 'Ōlelo Nāne -"Riddles" 'Ōlelo No'eau -"Wise Sayings"

LEARNER OBJECTIVES	APPENDICES
• Practices behavior that illustrates respect for self, fellow schoolmates, teachers and community resource people. • Listens to and accepts opinions of others in group discussions.	See Appendix IV Early Hawaiian Life, pp. 208-224.
• Sings selected Hawaiian songs introduced by the teacher while playing rhythm or harmonic instruments ('ukulele, guitar or autoharp) in time with the beat. • Creates melodies and lyrics concerning a Hawaiian theme using English and Hawaiian words, expressions, and phrases.	Unit V^a- A "Aloha", p. 116 - B "Alu Like", p. 117
• Identifies and relates colors to special feelings based on background experiences. • Identifies colors in Hawaiian.	
• Teaches younger children the rules for simple Hawaiian games and activities. • Participates competitively in Hawaiian games and sports. • Relates the use of Hawaiian games, sports, and quieter pastimes in former times to improving coordination and agility, physical strength, logical thinking and memory.	Unit V^a- C Nā 'Ōlelo Nāne, p. 118 - D Nā 'Ōlelo No'eau, p. 119

The following lessons were developed to accompany the social studies 4th grade guide, Early Hawaiian Life, pp. 97-103, "Society and Government"

Grade 4, Unit V^a

SCIENCE

- Activities to help the children understand the interacting forces in the bio-physical environment; the identity of the ant (or bee) as an individual and as a member of a society.

1. Ask: What is a society? Allow the children to predict.
2. Define kaiāulu (society) as a group of people living and working together, helping each other meet the needs of the group. A kaiāulu is a society, a community, a neighborhood.
3. Ask:
    a. Can you name some animals that live in large groups? (Ants, bees)
    b. What do we know about these animals? Encourage the children to share their thoughts and experiences about these animals.
    c. What do we want to find out about these animals? Write the children's questions on a chart.

E.g. Were there ants in early Hawai'i?

What is a worker ant?

Is there a queen ant?

What do they eat?

How do they reproduce?

How much weight can an ant carry? etc.

LANGUAGE ARTS

- Language activities dealing with the 'ohana (family) concept of early Hawai'i.

1. Ask
    a. What elements is the word 'ohana based on? ('ōhā relates to the offshoots of the kalo; -na is a suffix making a word into a noun)
    b. Who were Wākea and Papa? (the legendary ancestors of the Hawaiian and other Polynesian peoples; sky father/earth mother concept)

    See: Early Hawaiian Life, pp. 202-204.
2. Read excerpts from the following sources that give further information about Wākea and other ancestors of the early Hawaiians.

    Beckwith. Hawaiian Mythology, pp. 293-306.
    Malo. Hawaiian Antiquities, pp. 238-244.
3. Discuss the importance of the family genealogies and the way the family histories were preserved in chants.

    See: Appendices Unit V^a-E, p. 120 and V^b-F, pp. 145-150.
4. Plan a movie roll activity with the children.
    a. Have them write about each family member's role in their families based on the interview they conducted in social studies in Early Hawaiian Life, p. 102.

HEALTH/FOOD AND NUTRITION

- Activities to help the children build stronger and more positive interrelationships by studying the 'ohana concepts.

Have the children complete the lessons in Early Hawaiian Life, pp. 99-100, social studies. Take time to provide the children with an in-depth lesson on the 'ohana concepts. Use Nā Ki'i Ho'ona'auao (17" x 22" illustrations) as you discuss each concept with them. See the narrations that accompanies the illustrations.

1. Talk about Aloha
    a. Have the children share their poems written in social studies on "What Aloha Means."
    b. Using the chart with the meanings of aloha contributed by the children in Early Hawaiian Life, p. 100, add any new meanings contributed in their poems. These poems can be set to chant in music class.
    c. Talk about how to show aloha in the home, in school, in the neighborhood.

    Ask:

    1) How does it make you feel to give aloha to others?
    2) How does it feel to receive aloha?

MUSIC

- Songs dealing with the 'ohana concepts written by modern day composers such as : Irmgard Aluli, Haunani Apoliona.
  1. Teach a song about aloha, "Aloha" by Irmgard Aluli and Edna Pualani Bekeart.

     See: Appendix Unit V^a-A, p. 116. Recorded on Hawaiian Time, LP.
     a. Refer to health lesson on aloha. Have the children recall the poems they wrote in social studies about aloha.
     b. Sing or play the song for them. Have them look at the notation.
     c. Teach the song using the song sheets. Point out similar phrases.
     d. Encourage the children to sing with feeling.
     e. Motivate them to compose a melody for their poems of aloha.
     f. Have the music resource teacher help you record their melodies in music notation.

ART

- Activities illustrating feelings about the self and the 'ohana.
  1. Painting

     Tempera paint, wet-on-wet method

     9"x12" paper

     Paint brushes

     Visual Arts Act No. 1, pp. 291-292, Stanford Kettering Project
     a. Have the children think about the effect different colors have on them.
     b. Ask:

        What does 'ula'ula (red) do to you? Does it relax you or make you tense/excited? How does 'ula'ula make you feel?
     c. Do the same for a variety of other colors using the Hawaiian term for each color.

        See: Basic Hawaiian Vocabulary lists pp. 290 and 299 of this guide.

GAMES AND RECREATION

- 'Ohana (family) evening recreational activities

  Many long hours were spent in the Hawaiian home at night exchanging 'ōlelo nāne (riddles), reviewing 'ōlelo no'eau (proverbial sayings), or engaging in contests of words like reciting lists of objects to which another person must give its opposite or parallel meaning.
  1. Introduce these traditional activities to the children.
  2. Encourage them to engage in them so eventually they can engage in contests just as the Hawaiians did.
  3. Review the members of a family. See Early Hawaiian Life, pp. 98-99.
     a. Have the children engage in a contest using the members of a family as the list of words.
     b. Say the English words and have the children give the Hawaiian equivalent. They

SCIENCE

4. Have the children gather informational materials from the library.

5. Call your science resource teacher for an ant colony or bee hive to keep in the class so the children can observe in order to answer their questions.

6. After the children have had some time to research and observe, ask them:

   a. What Hawaiian 'ohana concepts have you observed in the ant community? bee hive? (kōkua, laulima, alu like, lōkahi, aloha, kuleana)

   b. What could happen to the ant or bee 'ohana or kaiāulu if the worker ants decided not to laulima (cooperate)?

   c. What would happen to the societies if the queen decided not to carry out her kuleana (responsibility)?

7. Have the children study

   a. The various stages of each insect

   b. The various kuleana of the workers

   c. The kuleana of the queen

8. Scrapbook

   Have the children make a scrapbook of flora and fauna around them. Have them draw a picture or press the leaves and flowers, and write the name of each in English as well as Hawaiian.

LANGUAGE ARTS

b. Have them decide how many panels they need.

c. Have them proof-read their descriptions, then write them on each panel.

d. The illustrations for each panel can be done in art class.

See: art lesson, pp. 111 and 113.

5. Read stories or legends about the role of children in the early Hawaiian 'ohana.

   See: Appendix III, Early Hawaiian Life, p. 205.

   Curtis. Life in Old Hawai'i, pp. 143-152. Story about three young men who want to train to become canoe builders. "Pupils of Linohau"

   Same source as above - pp. 131-134. "Bird-Catching" Story about the feather gathering techniques used by the early Hawaiians.

6. Motivate creative writing

   Have the children imagine themselves living in early Hawai'i. Encourage them to choose a career they would be interested in training for.

   E.g. - kahuna kālai wa'a-canoe builder
   - kanaka lawai'a-fisher
   - kapaka kūkulu hale-housebuilder

HEALTH/FOOD AND NUTRITION

3) How do we show our aloha

   - when someone leaves?
   - when someone is 'ōmaima'i (sick)?
   - when someone is huhū (angry)?
   - when someone is kaumaha (unhappy)?

d. Make up simulated situations and have the children dramatize how they would show their aloha in those situations.

e. Show them the 17" x 22" illustration of ALOHA. Talk about how the early Hawaiians shared their aloha in their 'ohana.

2. As each new 'ohana concept is taught, conduct similar activities that are meaningful to the children. Mount the illustrations as they are introduced. Review daily and remind the children of them as the opportunity arises. Encourage the children to learn the Hawaiian concepts in Hawaiian and to use them in their daily encounters.

3. Identify some of the values ('ohana concepts) and discuss how they relate to family interrelationships, how they strengthen home ties, how they influence family mental and physical health.

MUSIC

g. Encourage the children to teach their simple songs to each other.

h. Compile the songs into a music publication.

Produce a tape and send copies of the book and tapes to other school classes.

2. Teach a song about alu like (working together), "Ālu Like" by Haunani Apoliona.

See: Appendix Unit V^a-B, p. 117.

a. Discuss the meaning of the song. Talk about how Hawaiians used alu like to accomplish their work.

b. Pull out the words that are good characteristics to have:

ha'aha'a (humility)
pono (righteousness)
'oia'i'o (sincerity)

c. Play or sing the song for the children.

d. Teach the hui (chorus), then the pauku (verse).

ART

d. Have the children do the art activity. Encourage them to experiment with colors and to be creative.

e. Follow-up

1) Have the children look at the paintings and express their feelings about the art work.

2) Have them select one word that best describes their feeling about their picture. Have them print it on the bottom of the painting.

3) Have them decide on a face to draw on their painting that best describes this feeling.

2. Movie roll

a. Using the creative story written in language arts about apprenticeship, motivate the children to plan a movie roll illustrating their stories.

GAMES AND RECREATION

can be divided into two 'ohana to compete against each other.

4. Riddles and proverbs

Sources:

Appendix Unit V^a-C, p. 118

Appendix Unit V^a-D, p. 119

Judd, H. Hawaiian Proverbs and Riddles

Winne, Jane Lathrop. 'Ōlelo No'eau A Ka Hawai'i (available in most elementary school libraries)

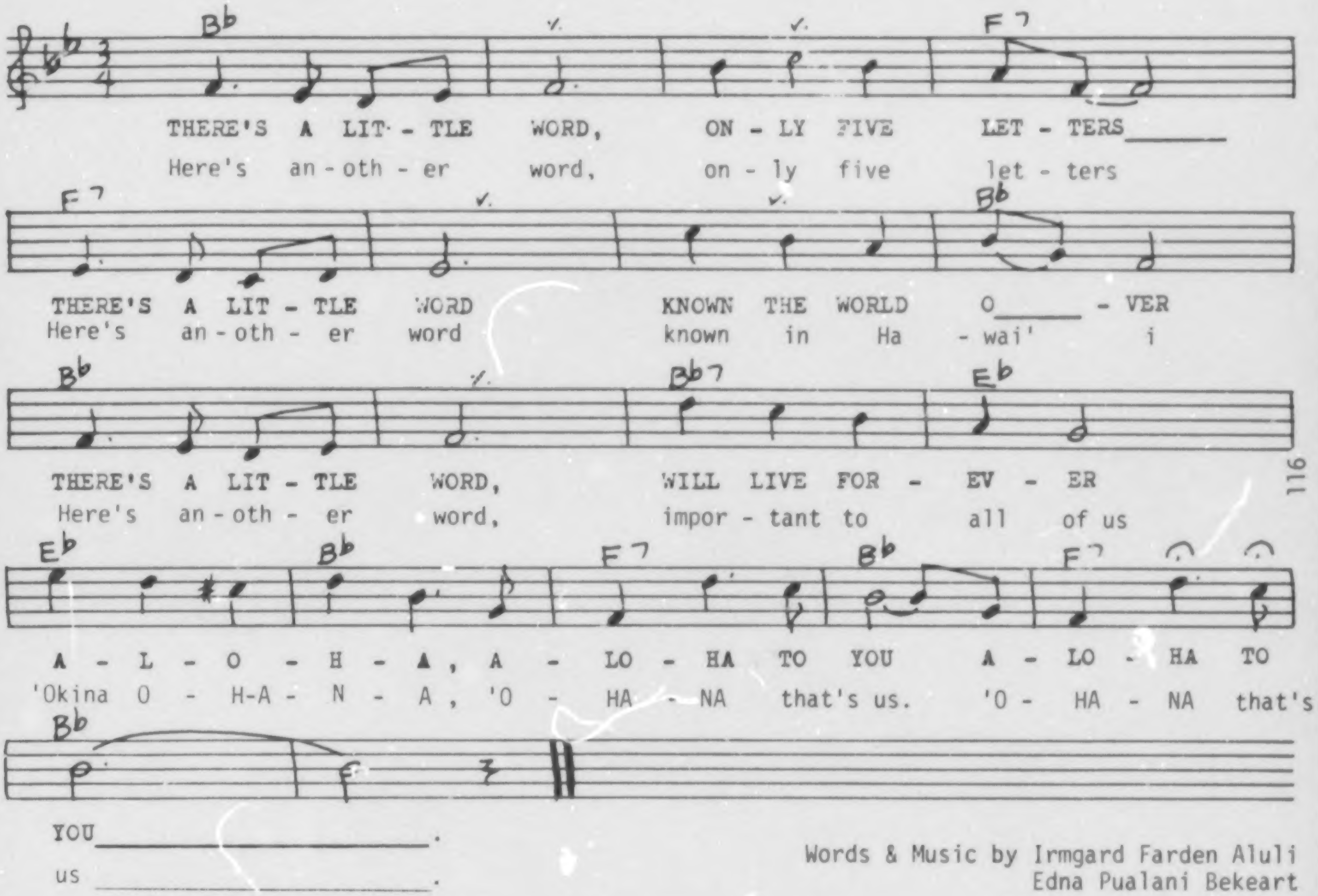
a. Write the 'ōlelo no'eau on chart cards and mount them on the bulletin board. Introduce each proverb, one per week or encourage the children to choose one to memorize per week until they have memorized all ten.

b. Daily recitation of these 'ōlelo no'eau will result in good retention.

SCIENCE	LANGUAGE ARTS	HEALTH/FOOD AND NUTRITION
	- kāhuna lapa'au-healing doctors etc. Have them write an account of their life under the apprenticeship of a kahuna (expert). Have them describe the setting, the people who live in the kauhale, daily routines, religious ceremonies, method of learning.	4. Divide the class into mini-'ohana. Assign each mini-'ohana a crisis event that could happen in a family. (E.g., death, fire, flood, illness, etc.) Discuss how it could have been prevented or minimized, how the family might react, and what other responses might be appropriate. 5. Send a letter home to the parents explaining 'ohana and what the children are doing. The children and parents could have a discussion and the child could give an oral report in class.

MUSIC	ART	GAMES AND RECREATION	
e. Use 'ukulele, autoharps, guitars for accompaniment.	b. Have them plan their panels by deciding on the most important scenes to illustrate. c. Give them blank newsprint and have them use crayons to illustrate the events in the story. d. Encourage them to fill up the spaces and to draw images in perspective. e. When the art work is finished, tape the panels together in proper sequence. f. Children may share their movie role and story with another class.	c. When they have memorized all ten, contests can be held. d. Do the same for 'ōlelo nāne (riddles).	

ALOHA


Bb
F7
THERE'S A LIT - TLE WORD, ON - LY FIVE LET - TERS
Here's an - oth - er word, on - ly five let - ters
F7
Bb
THERE'S A LIT - TLE WORD KNOWN THE WORLD O - VER
Here's an - oth - er word known in Ha - wai' i
Bb
Bb7
Eb
THERE'S A LIT - TLE WORD, WILL LIVE FOR - EV - ER
Here's an - oth - er word, impor - tant to all of us
Eb
Bb
F7
Bb
F7
A - L - O - H - A, A - LO - HA TO YOU A - LO - HA TO
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Bb
YOU.
us.

Words & Music by Irmgard Farden Aluli
Edna Pualani Bekeart

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ALU LIKE

By S. Haunani Apoliona
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HUI	E alu like mai kākou	Let us work together
	E nā 'ōiwi o Hawai'i	Natives of Hawai'i
	Nā pua mae 'ole	The descendants (flowers) that never fade
	Nā pua nani e	The beautiful, handsome descendants
	E alu like mai kākou	Let us work together
	E nā 'ōiwi o Hawai'i	Natives of Hawai'i
	Nā pua mae 'ole	The descendants (flowers) that never fade
	Nā pua mae 'ole	The descendants (flowers) that never fade

1.	E hana me ka 'oia'i'o	Let us work with sincerity
	E hana me ka ha'aha'a	Let us work with humility
	E 'ōlelo pono kākou	Let us speak at all times with goodness/righteousness
	E hana me ka 'oia'i'o	Let us work with sincerity
	E hana me ka ha'aha'a	Let us work with humbleness
	E 'ōlelo pono kākou	Let us speak at all times with goodness/righteousness
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	Nā pua mae 'ole	The descendants (flowers) that never fade

2.	E nānā aku i ke kumu	Let us look to the source (of our strength)
	E ho'olohe mai	Let us listen (to that source)
	E pa'a ka waha	Let us work not so much with the mouth
	E hana me ka lima	Let us work more with the hands
	E nānā aku i ke kumu	Let us look to the source (of our strength)
	E ho'olohe mai	Let us listen (to that source)
	E pa'a ka waha	Let us work not so much with our mouth
	E hana me ka lima	Let us work more with the hands
	E pa'a ka waha	Let us work not so much with the mouth
	E hana me ka lima	Let us work more with the hands

HUI

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NĀ ʻŌLELO NĀNE

The Riddles

1.	'Ula o luna	Red above
	'Ula o lalo	Red below
	Kani mai ke oli	It makes a sound
	Kani mai ke oli	It makes a sound
	He aha ia?	What is it?
	Moa kāne	Rooster.
2.	He 'ai ko luna	Food above
	He 'ai ko lalo	Food below
	He aha ia?	What is it?
	Kalo	Taro
3.	'Ekolu pā a loa'a ka wai.	Three walls and you reach water.
	He aha ia?	What is it?
	Niu	Coconut
4.	Hānau mai ua po'ohina	When it is born, it has gray hairs.
	He aha ia?	What is it?
	Kō	Sugar Cane.
5.	He ipu a he po'i,	A container and a lid,
	He ipu a he po'i.	A container and a lid.
	He aha ia?	What is it?
	'Ohe	Bamboo

He lā'au hele i ke kaua.	A tree that goes to war.
He aha ia? Koa	What is it? Warrior.
He lei poina 'ole.	An unforgettable lei.
He aha ia? Lei/Keiki	What is it? Child
He pūnāwai kau i ka lewa.	A spring suspended in the sky.
He aha ia? Niu.	What is it? Coconut.
He i'a lele me he manu.	A fish that flys like a bird.
He aha ia? Mālolo	What is it? Flying fish.
Ku'u wahi manu kia'i waena.	My little bird that watches the cultivated field.
He aha ia? 'Ō'ō	What is it? Digging stick (also name of a bird)
Kakahiaka 'eha wāwae, awakea 'elua wāwae, ahiahi 'ekolu wāwae.	In the morning four legs, at noon two legs, at evening three legs.
He aha ia? He kanaka	What is it? A person (In youth, crawling; in maturit walking; in old age, with a cane)

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NĀ 'ŌLELO NO'EAU
The Wise Sayings

1.	UA MAU KE EA O KA 'ĀINA I KA PONO.	The life of the land is perpetuated by righteousness. (Motto of the monarchy and the State of Hawai'i. Spoken by Kamehameha III in 1843 at Kawaiaha'o Church.)
2.	E MĀLAMA 'IA NĀ PONO O KA 'ĀINA E NĀ 'ŌPIO.	The traditions of the land are perpetuated by its youth.
3.	KŪLIA I KA LŌKAHI I KE OLA.	Strive for harmony in life.
4.	E ALOHA KEKAHI I KEKAHI.	Love one another.
5.	E HANA KAULIKE.	Play fair.
6.	E MAKA'ALA KĀKOU.	Let's be alert.
7.	E HO'OIKAIKA I KA MANA'O ME KE KINO.	Strengthen mind and body.
8.	KŪLIA E LOA'A KA NA'AUAO.	Strive to obtain wisdom.
9.	MAI MAKA'U I KA HANA.	Do not fear work.
10.	MAKA'U I KA MOLOĀ.	Fear laziness.
11.	'O KA 'OIA'I'O, HE 'ONIPA'A NO IA.	Truth is steadfast.
12.	PALA KA HALA, MOMONA KA HĀ'UKE'UKE.	The hala is ripe, the sea-urchins are fertile.
13.	MAI HA'ALELE I KE A'O.	Do not refuse to be taught.
14.	IMUA E NĀ PŌKI'I, A INU I KA WAI 'AWA'AWA, 'A'OHE HOPE E HO'I MAI AI	Forward brethren, and drink the bitter waters, there is no means of coming back. (Kamehameha I's challenging words to his warriors before the battle of Iao.)
15.	'A'OLE I PAU KU'U LOA.	My height is not reached. (I can go further.)
16.	LI'ILI'I KA 'ŌHIKI, LOLOA KA LUA.	The sand crab is small, but digs a deep hole. (Size does not limit accomplishments.)

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The Hawaiian Chant

By: Mikihala Hall St. Laurent

Hawaiians told many stories about the people and the events that surrounded them. Since they lacked a writing system, the people themselves committed these stories or poems to memory and retold them in the form of chants. Chants are stories or poems set to music through the use of a few melodic notes, usually no more than three. There are basically two types of chants: those that were recited (oli) and those that were accompanied by a dance (mele hula).

Chants "may be classified according to subject matter, language and structure and the method of recitation."[1] There were chants about: natural phenomena, genealogies (mele ko'ihonua), peoples' names (mele inoa), love (mele ipo), war (mele kaua), sadness (mele kanikau), and prayers (mele pule), just to mention a few.

Chants were composed by individuals or by groups. The term given to a poet was haku mele since he/she was an arranger (haku) of words. Chants that entertained were basically short and humorous and usually composed by an individual poet. Chants of a prophetic or genealogical nature were longer and usually composed by a group of poets. Though the lines of a chant were of no specific length, one of the principal points that had to be taken into consideration by the poets was the "expression of a thought in a terse and carefully adjusted sentence,"[2] since the words selected could often have a figurative or deeply hidden meaning termed kaona. Therefore, each phrase was carefully scrutinized before it was committed to memory.

The manner in which a chant was recited was solely dependent upon the chanter. "Styles of chanting classified as oli differ from each other with respect to rhythmic pattern, length of phrases, clarity of enunciation and use of the trill or 'i'i."[3] A detailed explanation is presented in Dorothy Kahananui's Music of Ancient Hawai'i.

In short, chants were stories and poems that were committed to memory, set to music and passed on from generation to generation.

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[1] Kahananui, Dorothy. Music of Ancient Hawai'i, Honolulu, 1962. p. 7.

[2] Plews, Edith Rice. Ancient Hawaiian Civilization, Tuttle Co., Japan, 1974. p. 180.

[3] Kahananui, Dorothy. Music of Ancient Hawai'i, Honolulu, 1962. p. 9.

KŪKĀKŪKĀ

The following lessons were developed to accompany the lessons found in the 4th grade social studies guide, *Early Hawaiian Life*, pp. 104-115, Grade 4, Unit V[b]

CONTENT AREAS	EMPHASES
SOCIAL STUDIES	*Kapu* system: The law system of early Hawai'i and its effect on Hawaiian society Power: Rule, authority, power of the Hawaiian monarchy versus that of modern Hawai'i Class system of early Hawai'i consisted of three main classes: *Ali'i* (Chiefs) → *Kāhuna* (Priests, experts-drawn from both of these classes) *Maka'āinana* (Commoners) → *Kāhuna* *Kauā* (Outcasts)
SCIENCE	Environment determined the location of *pu'uhonua* (places of refuge) Map Reading
LANGUAGE ARTS	Research skills Integrating library skills into the production of a research paper on an *ali'i* Communication (written) with governmental officials Reading and discussing stories, legends, and historical data about *Kapu* (system of laws and rules regulating daily life) *Ali'i* Studying and reading genealogical charts for information about *ali'i*

"Early Hawaiian Government."

LEARNER OBJECTIVES	APPENDICES
• Investigates in detail various aspects of the way of life in early (pre-contact) Hawai'i including family organization, the classes of society, the kapu system, means of producing and distributing food, the interrelation of spirituality and cognitive knowledge embodied in the kahuna class, and the economic and political elements of society. • Contrasts the chiefly and monarchal forms of government of previous times with the democratic type of government presently found in Hawai'i.	See the following appendices of Early Hawaiian Life: IV - Class System, pp. 228-230 VII - **Hawaiian Religion**, pp. 231-235 IX - Kapu System, pp. 241-243
• Identifies geographic features from a map of Hawai'i and explains how these have affected the way of life. • Describes some of the natural phenomena in Hawai'i using their Hawaiian names. • Describes some of the physical landmarks and attributes of Hawai'i, natural and human-made, using their Hawaiian names. (cliff, mountain, fish pond, river)	
• Writes prose or poetry in English, using Hawaiian words and expressions where appropriate, expressing the student's feelings about Hawai'i, Hawaiian food, music, dance, people and history. • Discusses some influences of the historical events which have taken place in the student's community and surrounding areas.	Unit V^b - C Mo'okū'auhau o Kamehameha, p. 137-139 - D Mo'okū'auhau o Kalākaua, p. 140 - E Mo'okū'auhau o Kawānanakoa-Kūhiō, p. 141 - F Birth Chant for Kauikeaouli, p. 142-150

CONTENT AREAS	EMPHASES
HEALTH	Mana (spiritual power) was an overpowering force which had to be preserved especially by the ali'i class. Kapu (rules) system of early Hawai'i bore a close relationship to our rules for healthy living today.
MUSIC	Mele inoa - chants and songs about and for the ali'i "Lili'u E" "Iā 'Oe E Ka Lā" "Ka Na'i Aupuni" "He Inoa No Likelike" "'Auhea 'O Ka Lani" Chants and songs written by the ali'i of post-contact Hawai'i "'Āinahau" by Princess Likelike "Hawai'i Pono'ī" by King Kalākaua "Aloha 'Oe" by Queen Lili'uokalani

LEARNER OBJECTIVES	APPENDICES
• Practices behavior that illustrates respect for self, fellow schoolmates, teachers and community resource people. • Performs roles in simulation activities illustrating individual rights and responsibilities in a group situation. • Contrasts the differences in marriage customs between the ali'i and maka'āinana classes. • Discusses the concept of mana in relationship to the custom of chiefly brother-sister marriages. • Discusses the concept of mana in relationship with the kapu placed on the person, personal effects, food and surroundings of the ali'i.	Unit V^b - A "Lili'u E", p. 135 - B "Ka Na'i Aupuni", p. 136
• Relates certain name chants (mele inoa) to the historical figures for whom they were chanted. • Indicates how much of our knowledge of former times has been learned from chants to the gods or chants of and for the chiefly class. • Performs from memory a simple Hawaiian chant. • Sings selected Hawaiian songs introduced by the teacher while playing rhythm or harmonic instruments ('ukulele, guitar or auto harp) in time with the beat. • Accompanies a Hawaiian chant using a rhythmic instrument such as an ipu, pū'ili, kāla'au, kā'eke'eke, or 'ili'ili. • Illustrates the tonal-rhythmic patterns of a Hawaiian chant through singing and performing interpretive dance patterns and body movements. • Coordinates motions and movements of hands and feet while performing a traditional hula kahiko or hula 'auana. • Recognizes that selected words and expressions found in chants and songs that have been learned can be incorporated into the student's passive or active vocabulary.	

CONTENT AREAS	EMPHASES
ART	Constructing a mini pu'uhonua (place of refuge) using materials from the natural environment Pencil sketching the human body in different poses including facial expressions
FOOD AND NUTRITION	Food for the ali'i was surrounded by kapu. Special care had to be used in its preparation. Role of children in the 'ohana (family) was a very important one. They were carefully nurtured by the kūpuna of the 'ohana.
GAMES AND SPORTS	Use of Hawaiian games Recreation Training of the ali'i for warfare

LEARNER OBJECTIVES	APPENDICES
• Expresses feelings about the kapu system as it relates to life today using pencil sketching. • Reproduces a significant symbol of religion that reflects the early Hawaiian belief in justice.	
• Realizes that nutritious food is needed for health and growth. • Recognizes the nutritional value of the foods eaten by the early Hawaiian ali'i. • Names some rules in the proper preparation of food for the ali'i of early Hawai'i as well as for those of today (e.q., visiting dignitaries at special occasions). • Names many of the foods eaten at a Hawaiian lū'au or pā'ina and indicates why they were and are important nutritionally. • Describes some early cooking methods which are still in use. • Discusses some of the differences in cooking methods available to the Hawaiians of former times and to people in modern Hawai'i.	See: Appendix III, Early Hawaiian Life, pp. 205-207 Unit VI - C Nutritional Value of Hawaiian Food Plants, pp. 200-201
• Relates the use of Hawaiian games, sports, and quieter pastimes in former times to improving coordination and agility, physical strength, logical thinking and memory. • Relates the use of Hawaiian games, sports and quieter pastimes to the training of youthful ali'i for leadership in society in former Hawaiian times. • Discusses the place of war and the means of waging war in ancient Hawai'i.	

The following lessons were developed to accompany the lessons found in the 4th grade social studies guide, Early Hawaiian Life, pp. 104-115, Grade 4, Unit V^b

SCIENCE

- Activities related to the environmental factors involved in the selection of sites for the pu'uhonua (places of refuge) where criminals could find refuge from the law.

1. Run off maps of each island for each student using the original from Nā Ki'i Ho'ona'auao (set of illustrations, 8½" x 11").

2. Discussion:

   a. What happens to people who break important rules today?

   b. What happened to them in early Hawai'i?

   c. What can people do today to avoid punishment?

   d. What did the people of early Hawai'i do to avoid being put to death? (The Hawaiian people tried to run to a place designated as a place of safety and peace called pu'uhonua.)

   Read: Dunford. The Hawaiians of Old, pp. 50-51.

3. Locate pu'uhonua on each island by using these and other resources:

   I'i. Fragments of Hawaiian History, p. 138.

   Kamakau. Ka Po'e Kahiko, pp. 17-19.

   Sterling and Sommers. Sites of O'ahu, p. 351 (list in index).

LANGUAGE ARTS

- Language arts activities dealing with early Hawaiian government and today's government

1. Planning and outlining

   See: Early Hawaiian Life, pp. 104-115 for suggested activities.

   a. Having chosen an ali'i to study in social studies, conduct a lesson on library skills dealing with "How to do research." See Integrating Library Skills into Content Areas: Sample Units and Lesson Planning Forms, OIS, Multi-Media Services, DOE 1979.

   b. Work with the librarian of your school.

2. Write letters to the senator or representative of your district. See: Early Hawaiian Life, p. 107.

   a. Plan the field trip to the capitol. Have the children write friendly letters of inquiry to the senator and representative of your district, informing them of your intent to to visit the capitol.

      1) Go over format for a friendly letter.

      2) Have the children contribute their thoughts on what should be included in the letter. Compose a class letter.

HEALTH

- Health activities to increase the children's awareness of "kapu" (rules) today and in early Hawai'i that were necessary to keep people living in a healthy environment

Kapu system. See: Early Hawaiian Life, pp. 241-243.

1. Talk about the different kinds of "rules" that keep us healthy and safe today.

2. Have the children share "kapu" that their parents have passed on to them, modern as well as early Hawaiian. E.g., Do not ask fisherpersons where they are going. Do not take fresh pork across the pali. Do not wear bright colors when going fishing.

3. Refer to Pūku'i. Nānā Ī Ke Kumu, p. 221 under "Taboo". Read some of the kapu references. If interest is high, encourage the children to do further research and interview other Hawaiians, especially fisherpersons or farmers.

4. Read: Hazama. The Ancient Hawaiians, p. 16.

5. Ask:

   a. How do you think you would have felt if you had to live under the kapu system? (maka'u - scared) (ha'alulu - nervous) (palekana - secure)

   b. What happens to your body when you are maka'u?

"Early Hawaiian Government."

MUSIC

- Songs and chants for and by ali'i

1. "Lili'u E" written for Queen Lili'uokalani. See: Keiki o Waimānalo LP, Tradewind Records, TS 1201, Waimānalo Keiki. For instructional procedures see Appendix Unit V^b-A, p. 135. This may be performed as a chant as well as a hula 'auana or hula kahiko.
2. "Iā 'Oe E Ka Lā" written for King Kalākaua. See: Elbert and Māhoe. Nā Mele o Hawai'i Nei, pp. 55 and 56 for words. Music available on Mele Inoa, LP Poki, SP 9003, Ka'upena and Pele.
3. "Ka Na'i Aupuni" (The Conqueror). This song was written in honor of Kamehameha I. See: Appendix Unit V^b-B, p. 136. The words, music and instructions are in the Comprehensive Musicianship Program, Zone 3, Book A, pp. 250 and 254.

ART

- Activities dealing with pu'uhonua - places of refuge for lawbreakers

1. Expressing feelings
   a. Have the children recall the discussion in health about feelings and record on a chart:

      maka'u -scared
      pa'apū o loko-tense
      ha'alulu -nervous
      hopohopo -anxious

   b. Ask: How would you feel knowing that you have committed a crime and can be put to death for it; but, you know you can make it to the pu'uhonua, place of refuge?

      pohala -relieved
      hau'oli -happy
      'olu'olu -conforted
      palekana -safe
      hopohopo -pressured

   c. When the children have become acquainted with the new vocabulary, have them model these feelings with their bodies. Have the children volunteer to be models. One child

FOOD AND NUTRITION

- Food supply and food preparation for the ali'i.

1. Ask:
   a. What kinds of foods did the ali'i eat?
   b. Were they high in traditional value?
   c. Who supplied the ali'i with their food?
   d. What other kinds of questions do you have about the food the ali'i ate?
   e. How were the foods prepared?
   f. Why was it important that the food for the ali'i be prepared in a particular fashion?
   g. Do we prepare special food for celebrities who visit Hawai'i?

      E.G., Political dignitaries and entertainment celebrities.

Sources to read about food kapu.
Buck. Arts and Crafts of Hawai'i, Vol. I, Food.

GAMES AND SPORTS

- Early Hawaiian games for the ali'i as well as the maka'āinana (common people)

--for recreation
--for physical fitness in preparation for warfare

Game - string figures - hei or pūkaula.

The making of string figures was a popular activity of the mākua (adults) of early Hawai'i. The children can learn some of these figures through instruction.
Sources:
Dickey. Bishop Museum Bulletin No. 54
Mitchell. Hawaiian Games for Today, "Eia Ke Kaula," p. 65 composed by Nona Beamer.

1. The chant is also in Kamehameha Schools: Ho'omaka'ika'i/ Explorations 1981, p. 65.
2. Many children know how to make two eyes using the kaula (string). Encourage them to be teachers and have them work with the individuals to teach them each step. Encourage them to use kokua, laulima, aloha, and lōkahi.

Physical fitness activities for ali'i as well as maka'āinana

SCIENCE

4. Have the children look at island maps to locate the places named in the above references.

Sources:

Hawai'i Visitors' Bureau

University of Hawai'i Press. Atlas of Hawai'i and individual island maps

5. Discussion

   a. Why were these locations selected?

   b. What do they have in common?

   c. In what kind of environment are the pu'uhonua located?

6. Display pictures of a few of the pu'uhonua such as Hōnaunau in Kona and Kualoa in windward O'ahu. Talk about the elements of the environment that make the location ideal as a pu'uhonua.

E.g.:		
	kahakai	- beach area
	kahawai	- river, stream
	kuahiwi	- mountain
	loko i'a	- fishpond
	pali	- cliff

7. Ask:

   a. What would life be like today if we still honored the concept of pu'uhonua?

   b. Where would you set up a pu'uhonua if you were the ali'i of your island?

   c. Why would you choose that spot?

LANGUAGE ARTS

   b. Have the children copy the leter using good form and handwriting. Send one letter to each of the legislators representing the district(s) in which the children live.

3. Read the story of Naupaka or show the film, #2031 H, "Naupaka", 8 min. This story is about a princess who falls in love with a maka'āinana but kapu forbids the marriage. Discuss the kapu that governed the lives of the three classes of people.

4. Talk about historical events that may have taken place on your island. E.g., battle at Nu'uanu Pali. Choose one event and read about it with the children. Motivate them to imagine the entire event and to write a poem describing the ali'i as he led his warriors or the entire event as it happened. Much of this poem will be imaginative. Encourage the use of Hawaiian words.

5. Read stories aboutthe ali'i and have the children listen for interesting facts about each ali'i.

   a. Sources:

      Curtis. Builders of Hawai'i.
      Hoyt. The Princess Ka'iulani.
      Mellen. Hawaiian Heritage.
      Mrantz. Women of Old Hawai'i, Hawaiian Monarchy, Hawai'i's Tragic Princess.

HEALTH

   c. What can happen to you if you are constantly afraid?

   d. What kinds of things today make us maka'u?

   e. What can we do to get rid of [illegible]se feelings?

   f. What did the Hawaiians do to get rid of their fears?

   g. Do you think that knowing one's place in society and the rules to follow might make one feel secure rather than constantly fearful?

6. Read: I'i. Fragments of Hawaiian History, pp. 59-61. The author tells how he almost broke two very serious kapu which would have resulted in death.

7. Mana (spiritual power)

   Read: Dunford. The Hawaiians of Old, pp. 38-39.

   a. Ask:

      1) How would you like to be the son of an ali'i living under the constant protection and surveillance of guards who needed to protect your mana?

      2) What would your life be like if these kahu were constantly on guard to protect you? Could you have fun like the other children?

Music

4. "He Inoa No Likelike"

   This chant was written in honor of Princess Likelike, sister of King Kalākaua and Queen Lili'uokalani.

   Source: Comprehensive Musicianship Program, Zone 3, Book A, pp. 230-246. Dance instructions as well as music and activities are found on these pages.

5. "Āinahau"

   This song was written by Princess Likelike in honor of the beautiful home and surroundings which had been left to her daughter, Ka'iulani, by Princess Ruth. The Princess Ka'iulani Hotel in Waikīkī now stands where 'Āinahau was located.

   Source: Māhoe. E Hīmeni Hawai'i Kākou, p. 6. Use the autoharp and 'ukulele to accompany the singing.

6. Review:

   See: Māhoe. E Hīmeni Hawai'i Kākou.

   a. "Hawai'i Pono'ī" by King Kalākaua, p. 16.
   b. "Aloha 'Oe" by Queen Lili'uokalani, p. 4.

Art

will model "Being maka'u" while the rest of the children will sketch him/her. This exercise in drawing is to develop the children's ability to observe and reproduce, using soft lead pencil. Give them about ten minutes to sketch each pose.

2. Building a pu'uhonua

   a. Plan a field trip to a pu'uhonua in your area to study the structure and layout.

   b. Have the children make sketches of what they see, including the plants and trees that grow around the pu'uhonua.

   c. Plan how you're going go build a replica. Decide on the materials you need, the committee and what will go into it. Consult books and resources for the placement of the houses, entrance, and other important parts of the pu'uhonua.

Food and Nutrition

Handy. Ancient Hawaiian Civilization.
Ihara. Research Materials, Bulletin Number 15.
Malo. Hawaiian Antiquities.

2. Simulation

   a. Have the children imagine themselves as children in early Hawai'i. Encourage them to describe how their kauhale prepared a feast for the ali'i of their ahupua'a.

   b. Have them include kapu involved in food preparation, roles played by people in the kauhale and foods prepared - how much, method of cooking, and who prepared the food.

   c. Have them work in a group or as individuals. Encourage 'ohana concepts as they alu like.

   d. Sharing

      Have them share their simulations. Encourage them to ask questions about the simulations and record these questions for further study in Unit VI

Games and Sports

1. Men were trained and ready to fight when their moku (district) was threatened by enemies. They engaged in a variety of games and sports to increase their skill, strength and readiness.

   Source: Mitchell. Hawaiian Games for Today.

   a. Pp. 17-26 describe a variety of games for strength and endurance.

   b. Pp. 28-43 describe games of skill. Implements for these games are available to all fourth grade classes through your district educational specialist for social studies.

   Source: Dunford. The Hawaiians of Old, pp. 153-169.

   Film Source: 16 mm. Film Catalog/1979, #3395 HM, "Sports of Old Hawai'i", 11 min.

2. As the students participate in the activities; have them think about how each activity helped prepare a warrior for warfare.

3. Study Dunford. The Hawaiians of Old, pp. 140-152 on warfare.

SCIENCE

8. Have the children draw a diagram of the pu'uhonua they would like to have on their island.

LANGUAGE ARTS

b. As each story is read have the children listen for the following bits of information:

   1) Who were his/her parents?

   2) What kind of childhood did he/she have?

   3) What kinds of changes were taking place when he/she ruled?

   4) What did he/she contribute to Hawai'i's history?

6. Study the genealogy charts in Appendix Unit V^b- C, D, E on pp. 137-141.

   a. Find the monarch being studied and see how he/she is related to Kamehameha I.

   b. Discuss how genealogy was passed from generation to generation (chants). Share the genealogy chant for Kauikeaouli. See: Appendix Unit V^b-F, pp. 142-150.

7. Read the story "Law of the Splintered Paddle" written in Hawaiian and English.

   See: Nā Ka'ao Kāhiko (DOE/OIS), p. 129.

   a. Discuss Kamehameha I and have the children infer what kind of ali'i he was.

   b. Creative writing

   Say, "Imagine yourself as an ali'i in

HEALTH

b. Read excerpts from Pūku'i. Nānā I Ke Kumu, pp. 149-155. Share interesting beliefs about "mana" and real experiences with this power, e.g., p. 151. Share the legend about Keku'iapoiwa (mother of Kamehameha) who craved to eat the eye of shark while pregnant with Kamehameha. This gave her the mana of the shark to give to her unborn son.

c. Explore the idea of what mana is. Is it really spiritual power from the gods or is it mental conditioning? How true is the saying: "You can do it once you put your mind to it?"

d. Ask:

   1) How easy is it for you to believe that everything in this world has mana?

   2) Why was it easy for the Hawaiians to accept this concept?

e. Marriage customs of ali'i

   1) Ask: what kinds of kapu surrounded the marriage of ali'i? Why were these kapu made?

   2) Read: Malo. Hawaiian Antiquities, pp. 9-20, 27-37, 54.

   3) Discuss the differences between the marriages of ali'i and those of maka'āinana.

MUSIC

7. "'Auhea 'O Ka Lani Lā?"

This song was composed in honor of King William Charles Lunalilo.

See: Elbert and Māhoe. Nā Mele o Hawai'i Nei, p. 36. (Write the words on a chart with the translation.)

- a. Have the children recall Lunalilo's place in the Kamehameha family. See: Appendix Unit V^b-C, pp. 137-139.
- b. Tell them about Lunalilo to get them acquainted with him. See: Curtis. Builders of Hawai'i, pp. 196-202.
- c. Introduce the chant by playing a tape or record. Have them watch the words on the chart.
- d. Talk about the translation of the chant. As each verse is taught, encourage the children to remember the meaning of the lyrics.
- e. Have them create motions for this chant using 'ili'ili (pebbles).

ART

3. Composing

Collect pictures of the kings, queens, princes and princesses of Hawai'i and create a composite picture of these ali'i. Have the children determine the central theme. Use the genealogy chart of the Kamehameha family to determine the members of the Kamehameha 'ohana and the interrelationship with the Lunalilo family.

See: Appendices for the genealogies of the ali'i.

Unit V^b-C, pp. 137-139, Kamehameha-Lunalilo

Unit V^b-D, p. 140, Kalākaua

Unit V^b-E, p. 141, Kawānanakoa-Kūhio

FOOD AND NUTRITION

of Early Hawaiian Life, pp. 130-147.

e. Discuss: How were the children of early Hawai'i alike or different from the children of today in helping in the home with cooking, cleaning, preparing or making household articles?

See: Early Hawaiian Life, pp. 205-207 for information on "Children of the 'Ohana" and their role in the 'ohana of early Hawai'i.

GAMES AND RECREATION

4. See Culture Studies: Hawaiian Studies Project Data Cards for more information on weapons and warfare.

5. Field trip: Visit the Bishop Museum to see weapons used by the Hawaiian warriors. Arrange for a special session with the DOE liaison teacher at the Bishop Museum who will present a mini-lesson on warfare. The children will be able to handle the weapons during the session.

SCIENCE	LANGUAGE ARTS	HEALTH
	early Hawai'i. Think of some kind of wrong doing on your island and write a story about how you want to change the situation by declaring a new law. Film: TAC 1974, #0065-1, "The Kalākaua Family."	4) Read: Ihara. The Eight Rainbows of 'Umi. a. Talk about the decision Liloa made when he discovered that 'Akahiakuleana was to have a child. (If it's a girl take care of her as your own. If it is a boy, send him to me when he is of age.) b. Discuss the kapu in the story especially the kapu of Liloa. Ask: how would you have felt if you had to run to King Liloa with guards standing with spears ready to strike down anyone who dared to approach the king? Tell or write about your feelings.

LILI'U E

Anton Ka'ō'ō Traditional

Lili'u e, noho nani mai	O Lili'u, sit in a pretty fashion
Ko kino e, ki'i milimili.	Your body, a doll to play with.
Ko maka e, nōweo wale.	Your eyes, so bright,
Ko papālina, e kūkū ana.	Your cheeks, standing
Ko po'ohiwi ani pe'ahi.	Your shoulders, swing fan-like
Ko poli e, nahenahe wale.	Your bosom, so soft.
Ko kuli e, nuku moi 'oe.	Your knee, just a moi fish beak
Ko wāwae, pahu a i luna	Your feet, pushes up.
Ha'ina 'ia mai ana ka puana	Tell the refrain
Lili'u e, noho nani mai	O Lili'u, sit in a pretty fashion.
Eō e Lili'u.i kou inoa	Answer to your name o Lili'u
Ka hae kalaunu o Hawai'i nei.	The crowning banner of Hawai'i.

"He Inoa No Kīna'u"
Reprinted from Nā Mele o Hawai'i Nei collected by Samuel H. Elbert and Noelani Māhoe.
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KA NA'I AUPUNI (The Conqueror)
Traditional

1.	E Hawai'i nui kuauli	Great Hawai'i with its verdant countryside (Lit. green back - poetic expression for Hawai'i)
	'O Maui nui a Kama	Great Maui of Chief Kamalālāwalu
	O'ahu o Kākuhihewa	Chief Kākuhihewa of O'ahu
	: Kaua'i o Manokalanipō:	Chief Manokalanipō of Kaua'i
HUI:	E na'i wale no 'oukou i ku'u pono 'a'ole e pau	You (chiefs) must all strive so that my bounty will not end
	I ke kumu pono o Hawai'i	The moral foundation of Hawai'i
	E mau ke ea o ka 'āina i ka pono	The life of the land is perpetuated in righteousness.
2.	I ho'okahi, kahi pu'uwai	Be of one heart
	I ho'okahi, kahi ka mana'o	Be of one thought
	I ho'okahi, kahi ke aloha	Be of one compassion/love
	: E mālama i ka maluhia:	Preserve the peace.

The first line in the hui was thought to be said by Kamehameha I on his death bed to the chiefs who were at his side.

The last line in the hui was uttered by Kamehameha III at Kawaiaha'o Church on July 31, 1843 after the islands had been restored its independence by Admiral Richard Thomas, for whom Thomas Square was named. (It was at this site that the ceremonies took place.)

The second line of verse 1 is also sung as "E nā hono a'o Pi'ilani - the bays of Chief Pi'ilani" (of Maui).

Mo'okū'auhau o Kamehameha

Prepared by Noelani K. Māhoe

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Rubincan, Mitton. *America's Only Royal Family*, Washington, D.C. National Genealogical Society, 1968.

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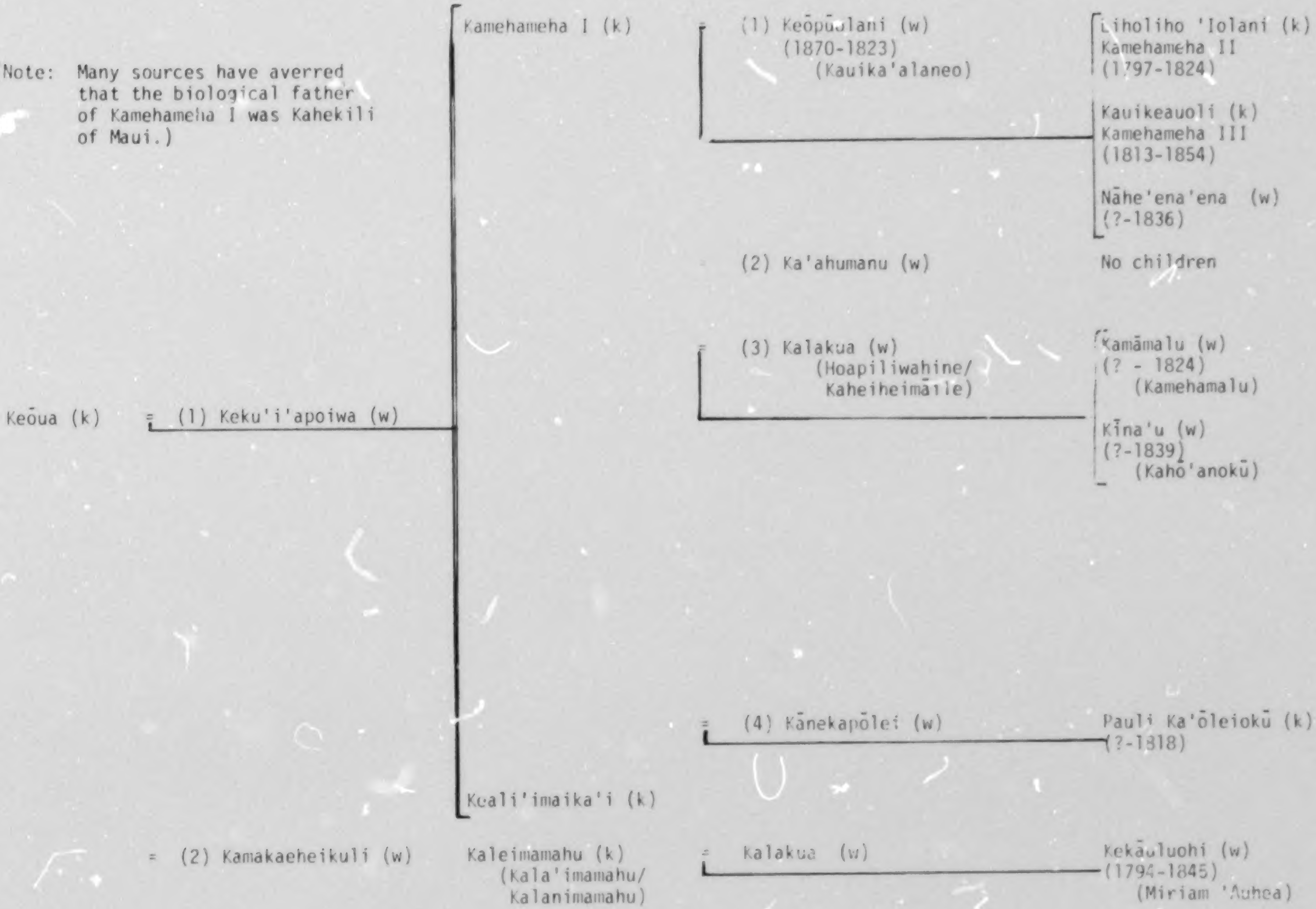
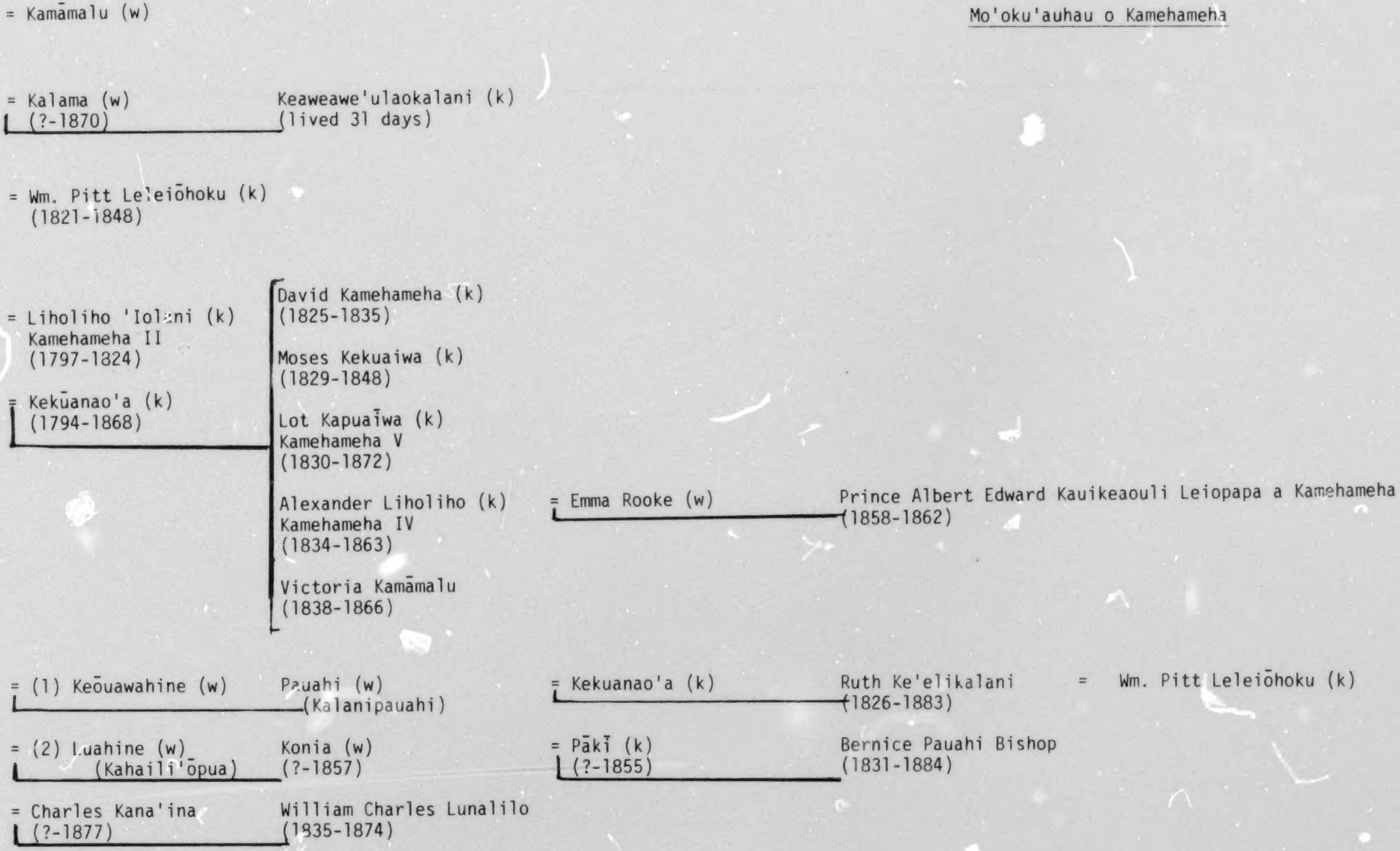
Archives of Hawai'i. "Kamehameha Dynasty and Lunalilo Relationship", revised 1971.

(Note: Many sources have averred that the biological father of Kamehameha I was Kahekili of Maui.)


Kamehameha I (k)
= (1) Keōpūolani (w)
(1870-1823)
(Kauika'alaneo)
Liholiho 'Iolani (k)
Kamehameha II
(1797-1824)
Kauikeauoli (k)
Kamehameha III
(1813-1854)
Nāhe'ena'ena (w)
(?-1836)
= (2) Ka'ahumanu (w)
No children
= (3) Kalakua (w)
(Hoapiliwahine/
Kaheiheimāile)
Kamāmalu (w)
(? - 1824)
(Kamehamalu)
Kīna'u (w)
(?-1839)
(Kahō'anokū)
Keōua (k)
= (1) Keku'i'apoiwa (w)
= (4) Kānekapōlei (w)
Pauli Ka'ōleiokū (k)
(?-1818)
Keali'imaika'i (k)
= (2) Kamakaeheikuli (w)
Kaleimamahu (k)
(Kala'imamahu/
Kalanimamahu)
= Kalakua (w)
Kekāuluohi (w)
(1794-1845)
(Miriam 'Auhea)

Mo'oku'auhau o Kamehameha



= Kamāmalu (w)

= Kalama (w)
(?-1870)
Keaweawe'ulaokalani (k)
(lived 31 days)

= Wm. Pitt Leleiōhoku (k)
(1821-1848)

= Liholiho 'Iolani (k)
Kamehameha II
(1797-1824)

= Kekūanao'a (k)
(1794-1868)

David Kamehameha (k)
(1825-1835)

Moses Kekuaiwa (k)
(1829-1848)

Lot Kapuaīwa (k)
Kamehameha V
(1830-1872)

Alexander Liholiho (k)
Kamehameha IV
(1834-1863)
= Emma Rooke (w)
Prince Albert Edward Kauikeaouli Leiopapa a Kamehameha
(1858-1862)

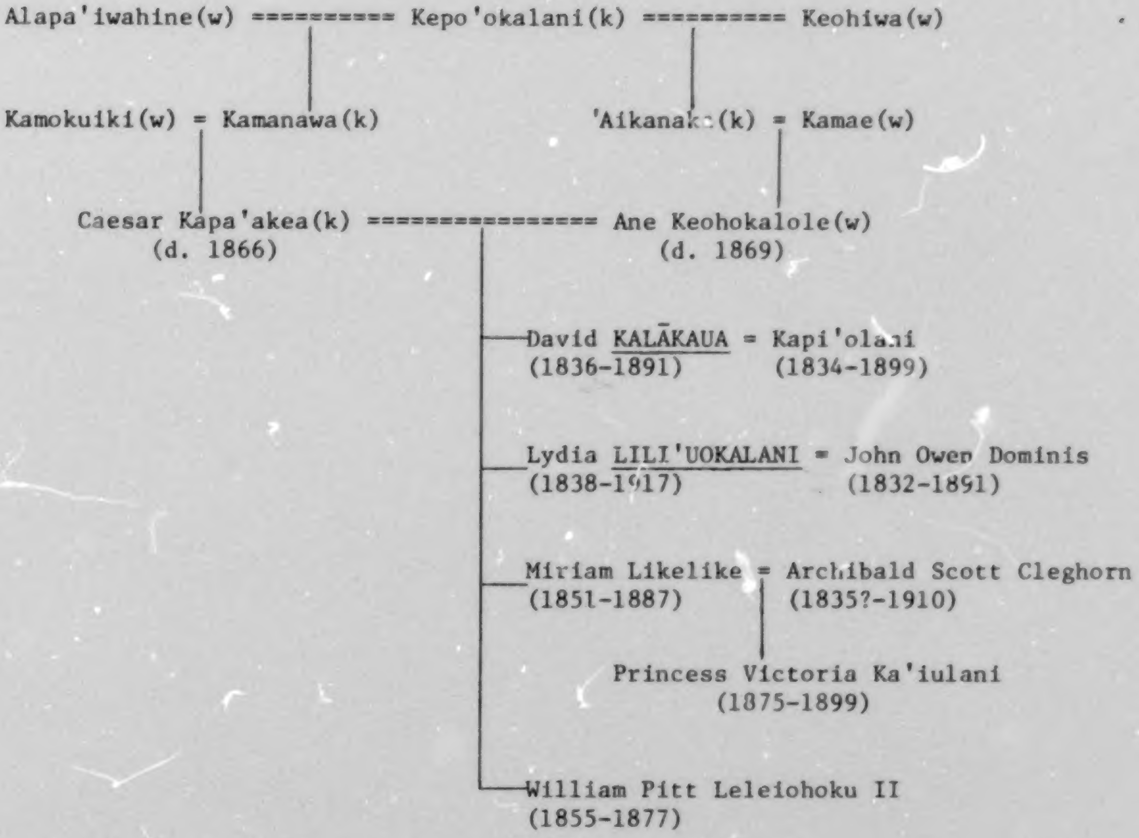
Victoria Kamāmalu
(1838-1866)

= (1) Keōuawahine (w)
Pauahi (w)
(Kalanipauahi)
= Kekuanao'a (k)
Ruth Ke'elikalani
(1826-1883)
= Wm. Pitt Leleiōhoku (k)

= (2) Luahine (w)
(Kahaili'ōpua)
Konia (w)
(?-1857)
= Pākī (k)
(?-1855)
Bernice Pauahi Bishop
(1831-1884)

= Charles Kana'ina
(?-1877)
William Charles Lunalilo
(1835-1874)

Mo'okū'auhau o Kalākaua


Alapa'iwahine(w) ========== Kepo'okalani(k) ========== Keohiwa(w)
Kamokuiki(w) = Kamanawa(k)
'Aikanaka(k) = Kamae(w)
Caesar Kapa'akea(k) (d. 1866)
================
Ane Keohokalole(w) (d. 1869)
David KALĀKAUA = Kapi'olani
(1836-1891) (1834-1899)
Lydia LILI'UOKALANI = John Owen Dominis
(1838-1917) (1832-1891)
Miriam Likelike = Archibald Scott Cleghorn
(1851-1887) (1835?-1910)
Princess Victoria Ka'iulani
(1875-1899)
William Pitt Leleiohoku II
(1855-1877)

Key: (k) kāne (husband) (w) wahine (wife) (=) married | children Ruling monarchs underlined

Mo'okū'auhau o Kawānanakoa - Kūhiō

*Ka'eo(k) = *Kamakahelei(w)
- *Kaumuali'i(k) = Kapua'amoku(w)
  - Kinoiki(w) = Kuhiō(k)
    - Kapi'olani (1834-1899) = KING KALĀKAUA (1836-1891)
    - Po'omaikelani (1841-1895) = Hiram Kahanawai
    - Kinoiki Kekaulike (1843-1884) = David Kahalepouli Pi'ikoi
      - Prince Edward Keli'iahonui (1869-1887)
      - Prince Jonah Kūhiō Kalaniana'ole (1871-1922) = Elizabeth Kahanu (d. 1932) = (2) Frank Woods
      - Prince David Kawānanakoa (1868-1908) = Abigail Campbell (1882-1945)
        - David Kalākaua (1904-1954) = Cecilia Waipā
        - Abigail Kapi'olani (1903-1961) = (1) Andrew Lambert
          - Edward Keli'iahonui Kawānanakoa
          - Po'omaikelani Kawānanakoa
          - Esther Kapi'olani=Filipo Marignoli
        - = (2) Harry Field
        - Lydia Lili'uokalani (1905-1970) = (1) W. J. Ellerbrook
          - Kekaulike Kawānanakoa
        - = (2) Charles Morris

Alapa'i(k) = #Kamokuiki(w)
- Jonah Pi'ikoi (d. 1859) = Kamake'e (Kekāhili) (d. 1871)
  - David Kahalepouli Pi'ikoi

Key:

*Rulers of Kaua'i #Kamokuiki was the grandmother of Kālakaua by union with Kamanawa(k)

= married | children (k) kāne (husband) (w) wahine (wife)

Birth Chant for Kau-i-ke-ao-uli

THE CHANT WAS composed in honor of a newborn son of Ka-mehameha I, Kau-i-ke-ao-uli (1813–1854), who, as Ka-mehameha III, succeeded his brother, Liholiho, to the Hawaiian throne in 1824. He was born seven years before the arrival in 1820 of the first New England missionaries.

The chant reflects conventions of the sacred art of the hula, which has been described as "in essence a magical ritual designed to bring rain and fertility" (Handy, *Cultural Revolution*, p. 12). In pre-Christian Hawai'i hula troupes, attached to the houses of ruling chiefs, performed their ritual prayers, songs, dances, and musical accompaniments primarily for two purposes and on two occasions. One was the annual *makahiki* festival, a first-fruits celebration beginning in October and lasting four months, in honor of the agricultural and fishing god Lono. The purpose of the other occasion, as in this chant for the infant Kau-i-ke-ao-uli, was to bring "an enriching and empowering magic" to the ceremonial and sexual union of *ali'i*, high chiefs, especially to the birth of a royal child destined to become a great leader (Handy, *Cultural Revolution*, p. 12).

Kau-i-ke-ao-uli, second son of Ka-mehameha I and the royal chiefess Ke-ōpū-o-lani, was stillborn, a circumstance alluded to in the repeated references to his mother's difficult labor. The babe was "prayed into life" by a high priest, Ka-malo-'ihi (also called Ka-pihe), whose therapeutic and prophetic prayer made much of the idea that "the heavens will come down"—in other words, that the native temples would be destroyed, that their priests would abandon or be forced from their priesthood, while the ruling chiefs themselves would lose their posts as sacred heads of government. They would become more like ordinary men.

In the birth chant of Kau-i-ke-ao-uli, in the repeated query "Who shall be here below?" there is perhaps a pervasive premonition of this same notion of the declension of the heavens and the transformation of the old ruling chiefs into mere human beings.

The name of the royal child, Kau-i-ke-ao-uli, meaning 'placed in the dark sky', is expressive of many of the thoughts obscurely, and yet so radiantly, embedded in the language of the original Hawaiian. The native word *ao* carried profound associations for the early Islanders. The word can mean sky, light, day, daylight, and dawn. It can refer to the regaining of consciousness, and to achieving mental enlightenment. The idea of dawn is closely connected with the idea of night, and both fit in with the Hawaiian time sense, so that in this ancient language it is

quite possible to speak of "that night that dawned yesterday." In some contexts *ao* can mean world or earth; and it can refer also to any kind of cloud.

So in this single nuclear element of Kau-i-ke-ao-uli's sacred name are clustered and concentrated the seeds of some of the major symbols and sweeping cosmological conceptions found in the language of this old noble poem.

* * *

Mele Hānau nō Kau-i-ke-ao-uli

I

O hānau a hua Kalani,
O ho'onā kū i luna,
O momoe o ma'ule ka piko,
O kolokolo ia pō ke ēwe,
O mulea, o malahia ka nalu, ke a'a.
O ho'onā kū o ka malama,
O ka'ahē a ka 'īloli,
O ho'owiliwili e hānau Kalani.
'O ia ho'i, 'o Kalani, hānau Kalani.

'O Kalani ia ho'i auane'i kō luna nei la.
'O wai la ho'i auane'i kō lalo la?

O hānau ka honua, a mole ka honua.
O kolokolo ka a'a, ka weli o ka honua.

Text: Mary Kawena Pukui

O lani weli ka honua, o lani 'i'ī.
O holo pu ka mole, o 'u'ina ke a'a,
O hale ka pou lewa ka honua.
O pali nu'u ka honua, ākea ka honua,
O honua kū, o honua noho ka honua,
O honua lewa, o honua pa'a, ka honua,
Ka honua ilalo, ilalo nu'u ka honua.
O honua a Kea, nā Kea ka honua.
O honua a Papa, nā Papa ka honua,
'O ka hiapo honua a Papa i hānau.
'O ia ho'i, 'o ka honua, hānau ka honua.

'O ka honua la ho'i kō lalo nei.
'O wai la ho'i auane'i kō luna la?

II

O hānau ka pō iluna,
Hānau ka pō i luna nei.
O lani hāne'e ka pō, o pīna'i ke ēwe.
O pipili ka pō, o moe anana le'a,
O kōhi ana, le'a ka pō o Mahina-le'a.
O huli ka pō, o ka'awale ka pili.
'O ke keiki pō lani keia a Kea i hānau,
Keiki 'akāhi a ka pō, keiki 'alua a ka pō,
Keiki 'akolu a ka pō.
'O ke kuakoko a ka pō,
E hānau mai auane'i ka pō,
'O ia ho'i o ka pō, hānau ka pō,
'O ka pō la ho'i auane'i kō luna nei la.

'O wai la ho'i auane'i kō lalo?
'O wai la ho'i o ka moku?

III

O hānau ka moku a kupu,
A lau, a loa, a a'a, a mu'o, a liko.
Ka moku ia luna o Hawai'i.
'O Hawai'i nei nō ka moku.
He pūlewa ka 'āina, he naka Hawai'i,
E lewa wale ana nō i ka lani lewa,
Hanou mai e Wākea, pā hano ia.
Mālie 'ikea ka moku me ka honua,
Pa'a 'ia lewa lani i ka lima 'akau o Wākea,
Pa'a Hawai'i, la'a Hawai'i, 'ikea he moku.

O ka moku la ho'i kō lalo nei.
[illegible] la ho'i kō luna, 'owai la?
O ke ao, 'oia ho'i hā.

IV

O hānau ke ao, o hiki a'e.
O 'ohi a'e ke ao, o hiki a'e.
O mokupawa ke ao, o hiki a'e.
O aka 'ula ke ao, o hiki a'e.
O moakaka ke ao māla'e.
'Ōpukupuku ke ao melemele.
O memele ka 'ōpua he la'i.
O 'ōpua nui, uli ka 'ōpua hiwahiwa,
O hiwahiwa ka 'ōpua lani'ele,

'Ele'ele ka lani huhulu weo,
Lani 'eka'eka hā'ele'ele,
Hākona, hākuma, hākumakuma,
'O ke ao nui mai he'e ua kaia.
E ho'owiliwili ana e hānau,
'O ia ho'i, 'o ke ao, hānau ke ao.

'O ke ao ho'i hā kō luna nei.
'O wai la auane'i kō lalo la?
'O ka mauna, 'oia ho'i.

V

O hānau ka mauna a Kea,
'Ōpu'u a'e ka mauna a Kea.
'O Wākea ke kāne, 'o Papa, 'o Walinu'u ka wahine.
Hānau Ho'ohoku he wahine,
Hānau Hāloa he ali'i,
Hānau ka mauna, he keiki mauna nā Kea.
O ka lili o Wākea, o ka ha'i i ka hala,
O ke kū kukū lā'au 'ana me Kāne,
I ho'oūka ai iloko o Kahiki-kū.
He'e Wākea, kālewa kona 'ōhua.
Kuamū 'ia e Kāne, kuawā 'ia e Kāne.
Ho'i mai Wākea a loko o lani momoe.
Moe Wākea, moe iā Papa.
Hānau ka lā nā Wākea,
He keiki kapu nā Wākea,
'O ka uluna a Wākea nā Kea nō.
'Oia ho'i hā, o ka mauna, hānau ka mauna.

That was the island over Hawai'i.
Hawai'i itself was an island.
The land was unstable, Hawai'i quivered,
moved freely about in space,
Wākea recognized the island, Hawai'i recognized
remained.
Visible were island and earth,
held in heavenly space by the right hand of Wākea,
Hawai'i was held, Hawai'i was seen, an island.

Down here shall be an island.
Who shall be above—Who?
The cloud, that is who it shall be.

IV

The cloud was born, it rose and appeared.
The cloud thrived, it rose and appeared.
The cloud came at dawn, it rose and appeared.
The cloud flushed with a reddish tinge, it rose and
appeared.
The cloud rose and appeared in clearest configuration,
turned yellow and menacing.
The horizon cloud hung yellow over a calm sea.
A swelling cloud, a dark cloud,
a cloud whose deepening darkness turned to black
in a sky already black with feathery clouds of dusk,
a sky heavy with blackness, rough, lowering,
a sky speaking in threat:

a vast cloud foretelling the approach of rain.
The sky writhed in labor to give birth.
He is this cloud: thus it was born.

A cloud shall be up here.
Who shall be below?
The mountain, that is who it shall be.

V

Born of Kea was the mountain,
the mountain of Kea budded forth.
Wākea was the husband, Papa Walinu'u was the wife.
Born was Ho'ohoku, a daughter,
born was Hāloa, a chief,
born was the mountain, a mountain-son of Kea.
Jealous was Wākea, he revealed his fault,
told of his smiting Kāne with a club
in battle, fought in Kahiki-kū.
Wākea was routed, fled in confusion with his family.
None spoke to Wākea save in whispers, but Kāne
shouted.
Wākea returned to the sky seeking a wife.
He mated, sleeping beside Papa as mate.
The sun was born to Wākea,
a sacred offshoot of Wākea,
the growth of Wākea was Wākea's own.
He was this mountain's growing, this chief: so was the
mountain born.

The mountain shall be down here.
Who shall be above?
The sun, that is who shall be above.

VI

The sun was born to be mine,
mine the sun of Kupanole
At Kupanole the sun held back,
the sun held back for Hina's sake.
Rays of the sun made secure
the boundaries of Hilinamā, of Hil[illegible]u
joined the branch of a *kamani* tree
to the linked branches of the red *kamani*.
The wings of Halulu were broken, broken.
They were severed by the sun,
by the sky-voyaging sun of Kea.
Wākea was below, above was the sun,
the sun-child born to Kea.
He it was, the sun-child: the sun brought to birth.

The sun shall be above.
Who shall be below?
The ocean, that is who shall be below.

VII

The ocean was born of Kea,
the surf for Kea, the sea for Kea,
the wild sea, the gentle sea for Kea,
the coral beds, coral caverns that grow for Kea,

the fish who twist and turn in the surge.
Deep black were the headlands pointing seaward,
broad lay the ocean spread out below.
Who shall be above?
Kū, Lono, Kāne, Kanaloa,
Ka'eka'e and Mauli,
composers of prayers, givers of prayers,
high priests who uttered solemn prayers in sacred
places,
voiced them in places free: free of kapu was the place
of the chief!

Born was Kū, let him remain above.
Who shall be below? Who indeed?

From Háloa men came forth, chiefs multiplied.
Chief Ka-mehameha was conceived above,
the first chief, the first up here.
The Chiefess Kau-i-ka-'alaneo was the second up
here.
They joined, clung together. Was it not so?
Ka-lani-nui-kua-liholiho was the first
to inherit the kapus, the first up here.
Chief Kau-i-ke-ao-uli was the second up here.
Brothers are they, close joined: they hold firm to
one another.

So it is.

'O ka mauna auane'i kō lalo nei.
'O wai auane'i kō luna la?
'O ka lā, 'oia ho'i hā.

VI

O hānau ka lā a nā'ū,
O nā'ū ka lā e Kupanole.
'O Kupanole ka lā kōhia,
Kōhia ka lā iā Hina.
'O ke kukuna o ka lā pa'a,
'O ka pe'a o Hilinamā, o Hilinehu,
'O ka lālā o ke kamani,
'O ka hui o ke kamani 'ula.
'O ka 'ēheu o Halulu,
Ke ha'ina mai lā, ha'i,
Ke hakia mai la e ka lā,
E ke keiki hele lani ā Kea.
'O Wākea ka i lalo, o ka lā ka i luna,
'O ke keiki ia ā Kea i ho'okauhua ai.
'O ia ho'i o ka lā, hānau ka lā.

'O ka lā auane'i kō luna.
'O wai auane'i kō lalo nei?
'O ka moana, 'oia ho'i hā.

VII

Hānau ka moana ā Kea,
O nā nalu nā Kea, o ke kai nā Kea,
O kai kāne, o kai wahine nā Kea,

O ko'a kū, o ko'a hālelo ulu nā Kea,
O ho'owiliwili a ka i'a iloko o ka moana.
Uliuli, 'ele'ele nei lae o ka moana.
O ka moana auane'i kō lalo nei.
'O wai auane'i kō luna e?
'O Kū, 'o Lono, 'o Kāne, 'o Kanaloa,
'O Ka'eka'e, 'o Mauli,
O haku o ka pule, o nu'u pule,
O nu'u kahuna, o 'eli'eli holo i mua kapu,
O 'eli'eli holo imua noa, noa ka hānau 'ana o ke ali'i.

Hānau Kū, 'o Kū la auane'i ho'i kō luna.
'O wai la ho'i kō lalo nei, 'o wai la?

'O Hāloa, puka kānaka, laha nā ali'i.
Loa'a i luna nei 'o Ka-lani Mehameha,
'Ekāhi ka lani la, 'ekāhi o luna nei.
'O Ka-lani Kau-i-ka-'alaneo 'elua o luna nei.
Pili lāua, ua mau paha, 'oia paha?
'O Ka-lani-nui-kua-liholiho 'akāhi,
I ke kapu la, 'akāhi o luna nei.
'O Ka-lani 'o Kau-i-ke-ao-uli, 'alua o luna nei,
Pili lāua, ua mau paha.

'Oia e.

Birth Chant for Kau-i-ke-ao-uli

I

The chiefess gave birth,
she bore in labor above,
she lay as in a faint, a weakness at the navel.
The afterbirth stirred at the roots, crept in darkness,
in waves of pain came the bitter bile of the child.
This was a month of travail,
of gasping labor,
a writhing to deliver the chief.
He is this chief, born of a chiefess.

Now a chief shall be here above.
Who shall be below?

Born was the earth, rooted the earth.
The root crept forth, rootlets of the earth.
Royal rootlets spread their way through the earth to hold firm.
Down too went the taproot, creaking
like the mainpost of a house, and the earth moved.
Cliffs rose upon the earth, the earth lay widespread:
a standing earth, a sitting earth was the earth,
a swaying earth, a solid earth was the earth.
The earth lay below, from below the earth rose.
The earth was Kea's, to Kea belonged the earth.

The earth was Papa's, to Papa belonged the earth,
the earthly firstborn borne by Papa.
He is this earth, the earth that was born.

The earth shall be here below.
Who shall be above?

II

Born was the night above,
born was the night up here.
The heavens slid away into the night, swift came the afterbirth.
The nights came closer together, stretching along
until came a separation, making distinct the night of Mahina-le'a.
The night turned, closeness became separated.
This is the royal offspring of night borne by Kea,
first child of the night, second child of the night,
third child of the night.
The night lay in travail
to give birth to the night.
He is this night, the night newly born.

Who shall be below?
Who shall be upon the island?

III

Born was the island, it grew, it sprouted,
it flourished, lengthened, rooted deeply, budded, formed tender leaves.

NOTES

I

Kea (for Wākea) and Papa. Progenitors of chiefs. The birth of the prince is linked to cosmic events and these are personified and mythologically defined in the mating of the sky-father, Wākea, and the earth-mother, Papa.

II

Born was the night: Night (*pō*) here refers to the world of the unseen as revealed in dreams. Thus the gestation and birth of the child was accompanied by a series of revelations of increasing intensity, until there appeared Mahina-leʻa, when "the moon shone at its brightest"—probably the act of parturition. The sequence of three "royal offspring borne by Kea" may be an allusion to the three children of Ke-ōpū-o-lani sired by Ka-mehameha.

V

Hoʻohoku and Hāloa: Hoʻohoku was a daughter of Wākea by whom she bore offspring. Hāloa was the name of two sons born of the mating. The first son was the taro plant; the second (an ancestor of Kau-i-ke-ao-uli) was a man. The name Hāloa (literally, 'long breath') is based on the form *hā*, referring to breath expelled to impart *mana*, 'magical power', as when a priest would exclaim "Hā!"

Kāne: A comprehensive source-god worshiped by early Polynesians as the god of life, water, sunlight, and the whole world of nature. Three other major gods are invoked later in the chant. Kanaloa, companion of Kāne, is introduced as a god of healing. Kū, a male fertility symbol, was regarded as a god of human activities, especially canoe-making and war. Lono, also concerned with fertility, presided over the peaceful activities of fishing and agriculture.

VI

sun of Kuanole: The allusion is obscure, but appears to refer to a place involved in legends of the moon-goddess Hina. The "boundaries of Hilinamā, of Hilinehu" likewise may be a reference to mythical events connected with the monthly lunar cycles. Malo, *Hawaiian Antiquities*, lists Hilinamā as the name of a month and Hilinehu as the name of both a month and a star.

Halulu: A mythical bird and messenger of the high gods, one of the sons of the goddess Haumea, mother of Pele and her sisters. The historian Kamakau noted that the feathers that rise and fall on the heads of images in answer to *kahuna* prayers were believed by Hawaiians to come from the sacred birds Halulu and Kuwaʻa—"wonderful feathers made out of particles of water from the dazzling orb of the sun" (Beckwith, *Hawaiian Mythology*, pp. 91–92).

VII

Kaʻekaʻe and Mauli: Two legendary, if not historic, men famous for their religious piety. The gods kept them alive until extreme old age. In a chant honoring Ka-mehameha, *Fallen Is the Chief* (*Haui ka Lani*), they are mentioned as forebears (*kupuna*) of Ka-mehameha.

Kau-i-ka-ʻalaneo: Literally, 'placed in the clear sky'; another name for Queen [illegible]lani, 'the flower opening in the sky'.

Ka-lani-nui-kua-liholiho: Liholiho, Ka-mehameha II (1792–1824), elder son of Ka-mehameha I by Ke-ōpū-olani. After his father's death, the widowed Queen Ka-'ahumanu proclaimed that, according to Ka-mehameha's will, she and Liholiho would rule over the Kingdom. Both Liholiho and his sister-wife, Queen Ka-māmalu, died of measles while in London in 1824, when on a mission to discuss the possibility of a British alliance with Hawai'i.

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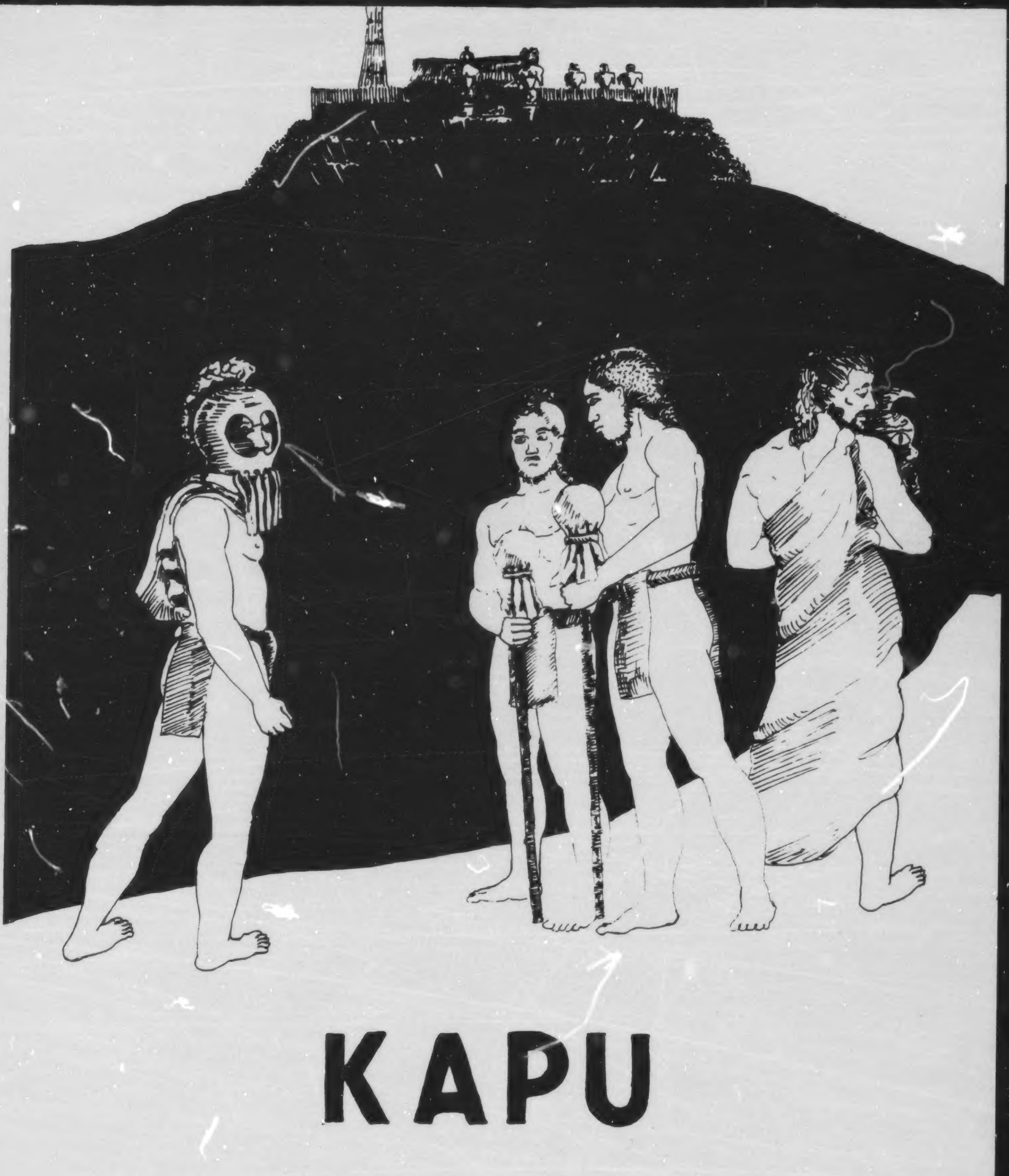


KAPU

Grade 4, Unit V^C The following lessons were developed to accompany the lessons found in the 4th grade social studies guide, Early Hawaiian Life.

CONTENT AREAS	EMPHASES
SOCIAL STUDIES	Religion of Early Hawai'i Akua (gods) 'Aumākua (family guardian spirits) Heiau (places of worship) Kāhuna (priestly experts) Kapu (system of laws, rules and regulations governing all aspects of life) Religions of today Buddhism Christianity Hinduism Taoism Symbols of royalty Materials and tools used in the production Steps involves in the production Significance of the symbols.
SCIENCE	Hawaiian medicinal plants Recognition of plants Use of the plants as medicine Cultivation procedures Native Hawaiian birds (Bird watching) Their usefulness and habits Availability today
LANGUAGE ARTS	Reading, discussing, summarizing Legends of akua (gods), 'aumākua (family guardian spirits) and kupua (demigods) Legends, stories and personal observations of early Hawaiian featherwork (symbols of royalty) Reading about and planning a Makahiki Learning to find information from books Planning and working with others--communication skills

LEARNER OBJECTIVES	APPENDICES
• Identifies and compares the function of religion in early Hawai'i with that of one's own ethnic group and other ethnic groups. • Explains the role of religion in the societal structure of early Hawai'i. • Identifies the effects of kapu (system of rules) on Hawaiian society. • Describes and explains the importance of the symbols that were worn by the ali'i of early Hawai'i.	See: Appendices of Early Hawaiian Life V - Ho'oponopono, pp. 225-227 VII - Hawaiian Religion, pp. 231-235 VIII - Kāhuna, pp. 236-240 IX - Kapu System, pp. 241-243 X - Symbols of Royalty, pp. 244-248
See: Science in Hawai'i, p. J1, for science objectives • Discusses the kinds of plants that grow in the different environmental zones from the seashore to the mountain. • Compares the Makahiki time in early Hawai'i with its lifting of the kapu and the general rejoicing associated with it to harvest festivals in other cultures which have been studied. • Classifies flora (and fauna) found during nature study excursions in the different environmental zones on the islands from the beach areas to the uplands.	
• Works with partners or groups on Hawaiian language or culture oriented activities such as an oral presentation, a bulletin board display or Makahiki festival. • Listens to and answers questions orally and in writing about a legend or story about Hawai'i told in English but containing Hawaiian expressions and phrases appropriate to the child's level of language development in Hawaiian.	Unit V^c - B Ka Makahiki, pp. 174-175

CONTENT AREAS	EMPHASES
HEALTH	Kāhuna (priests/experts in technology) of early Hawai'i, especially the kahuna lapa'au (healing doctor) Ho'oponopono (the problem-solving system of the Hawaiians)
MUSIC	Chanting: Makahiki chant for the god Lono Contemporary songs about the flowers and plants of early Hawai'i that were very important as sources of medicine; but today, the beauty of these plants is compared to the beauty of loved ones Songs of Hawaiian birds prized for their feathers

LEARNER OBJECTIVES	APPENDICES
• Investigates the interrelation of spirituality and cognitive knowledge embodied in the kahuna class. • Discusses the training of kāhuna who specialized in using herbs and other methods to improve and restore health. • Describes the ethnobotanical uses of plants by the Hawaiians including medicine, religious and social rites. • Describes the way of life of the early Hawaiians as a result of adaptation to the environment. • Identifies the steps which took place during the Hawaiian family therapy called ho'oponopono.	Unit V^c - C Medicinal Plants, pp. 176-177
• Performs from memory simple Hawaiian chants. • Sings selected Hawaiian songs introduced by the teacher while playing rhythmic or harmonic instruments ('ukulele, guitar or autoharp) in time with the beat. • Creates lyrics and melodies concerning a Hawaiian theme using English and Hawaiian words, expressions and phrases. • Recognizes that selected words and expressions found in chants and songs that have been learned can be incorporated into the student's passive or active vocabulary. • Associates music within the mystic and religious/spiritual life of the non-literate Hawaiian of former times.	Unit V^c - A "Ho'okupu Chant," p. 172 D Birds of Hawai'i, pp. pp. 178-179

CONTENT AREAS	EMPHASES
ART	Hawaiian crafts - using materials from the environment to create game implements Construction of akua loa banner and pole image necessary in the Makahiki celebration Crafts: Pala'ie (loop and ball), kilu (coconut bowl) and hū (top)
GAMES AND RECREATION	Simple Hawaiian games. Advanced body movements in games and dances Competitive participation in games
MATHEMATICS	Counting in early Hawai'i

LEARNER OBJECTIVES	APPENDICES
• Reproduces implements needed to participate in early Hawaiian games by using the same materials from the environment used by the early Hawaiians. • Reconstructs a symbol of religion signifying an important aspect of Hawaiian living.	
• Teaches younger children the rules for simple Hawaiian games and activities. • Performs more advanced or complicated body movement patterns in games and dances. • Participates competitively in Hawaiian games and sports. • Relates the use of Hawaiian games, sports, and quieter pastimes in former times to improving coordination and agility, physical strength, logical thinking and memory. • Relates the use of Hawaiian games, sports and quieter pastimes to the training of youthful ali'i for leadership in society in former Hawaiian times.	
• Counts in Hawaiian using the early Hawaiian system of counting.	Unit V^C - E Ka Helu Hawai'i-Hawaiian Enumeration Bulletin Number 16, pp. 180-181

The following lessons were developed to accompany the lessons found in the 4th grade social studies guide, Early Hawaiian Life, pp. 116-121, Grade 4, Unit V^{C}

SCIENCE

- The medicinal plants of early Hawai'i played a significant role in the religious life of the Hawaiian people.

Opening: The Hawaiians believed that all plants had special power given to them by the gods to heal disease.

Study the Hawaiian medicinal plants. Learn how to cultivate them in a Hawaiian medicinal garden on the school grounds.

1. Refer to Science in Hawai'i, A Fourth Grade ETV Guide, "Hawai'i's Plants as Medicine, pp. J1-J10.
2. As the children study the functions of a kahūna lā'au lapa'au in health, begin a study of the Hawaiian plants found in Hawai'i many years ago.
3. Use the Aloha Council, Boy Scouts of America book, Hawaiiana, pp. 56-97 as a reference for recognizing the plants in the environment.
4. Go on a walking tour of the community and locate some of the plants. Ask permission to take samples or plantings in plastic bags. Have the children note where each plant grows and the different environmental zones.
5. Enlist the help of the school custodian to help with this project. Have the children learn how to become planters by having them handle small 'ō'ō that they can make out of guava wood.

LANGUAGE ARTS

- These activities in language arts deal with the importance of the gods, family gods and demigods in the lives of the Hawaiian people.

Reading legends dealing with the gods and kāhuna. See language arts activities listed in Early Hawaiian Life, p. 120. These reading activities may be set up in a reading corner. Have available copies of:

Buffet. Puapualenalena

Curtis. Life in Old Hawai'i

Dunford. The Hawaiians of Old

Lyons. Fire and Water and Other Hawaiian Legends

Malo. Hawaiian Antiquities

McBride. The Kāhuna

Morrill. Kahuna: The Black and White Magicians of Hawai'i

Ne. Legends of Moloka'i

Pūku'i. Tales of the Menehune

Pūku'i. The Water of Kāne
Contains legends from the different islands of Hawai'i.

Thompson. Hawaiian Tales of Heroes and Champions

Adventures of Kamapua'a

'Aukele the Fearless

HEALTH

- The following inquiry activities serve to clarify the importance of the "health doctors" in the religious life of the people. See: Early Hawaiian Life, pp. 236-240.

1. Ask:
   a. What is a "kahuna"? Have the children make predictions based on the amount of reading they've done and on stories they've heard from their parents or other family members.
2. Have them discuss the religious aspects of the kahuna class. Read: Dunford. The Hawaiians of Old, pp. 34-35.
3. Have them ask more questions about the role of the kāhuna in early Hawai'i. Using these questions, organize research into the role of the kāhuna. For references see Early Hawaiian Life, pp. 238-240.
4. Have the children begin a chart of all the kāhuna they read about in their research. As they find information, have them add it on to the class chart.

Type of Kahuna	Function
Kahuna Lapa'au	Medical doctor
Kahuna Kū'auhau	Genealogy specialist

5. Ask: How were the kāhuna trained to be experts? Who trained them?

"Religion."

MUSIC

- Learn the "Ho'okupu Chant" composed by some members of the staff at Kamehameha Elementary School. This chant was written for Lono, god of agriculture and games. This chant beckons the people to bring their makana (gifts) to Lono.

  See: Appendix Unit V^c-A, p. 172.

  1. Teaching procedure
     a. Write the words on a chart.
     b. Have the children identify the familiar Hawaiian words. Underline them with a red pen.
     c. Introduce the new words to the children.
     d. Demonstrate the use of the minor third used in Hawaiian chants by chanting in two tones the Pī'āpā song ('Ā, alapī'i, 'ā) which the children may have learned in an earlier grade. Ask the Music or Hawaiian Studies Resource Teacher for kōkua, if needed. Have the children listen carefully to the two tone minor third chanting style.

ART

- In order to play some of the early Hawaiian Makahiki games, the implements needed to be made. The Hawaiians took the materials from their environment and fashioned their game implements.

  1. Making a hū, kilu, pala'ie.
     a. See games and recreation plans for games for quieter moods.
     b. Instructions for making these are found in:

        Mitchell. Hawaiian Games for Today

        hū - p. 64

        pala'ie - pp. 61-62

        kilu - p. 59
     c. Materials needed:
        1) Hū: kukui nuts
           coconut midribs
           electric drill
           sandpaper
        2) Pala'ie:
           12 coconut midribs per student

GAMES AND RECREATION

- Using the discussion of medicinal doctors in health, talk about the importance of exercise, proper sleep and good nutrition.

  1. Have the children recall the purposes of the Hawaiian games in Unit V^b pp. 129, 131 as they were used by the ali'i for skill building.

     Hawaiian games were an important part of the Makahiki (Harvest) Festival. For four months the people engaged in these games building their skills.
  2. Engage in Hawaiian wrestling to build strength.
     a. Use Mitchell's Hawaiian wrestling games on pp. 17-26.
     b. Have play-offs and pick a few to be performers in a Makahiki festival at your school.
     c. Begin each game with "Ho'omākaukau" (Get ready!). "'O ia!" (begin!)

SCIENCE

6. Have them cultivate the soil and soften the soil for planting just as the Hawaiians did.

7. Talk about early Hawaiian fertilizer or mulch that was used to enrich the soil.

8. Discuss and research the procedure of planting.

   Did the Hawaiians conduct prayers?

   Were there rituals?

   What kind of fertilizer was best for which kind of plant?

   Resources: Handy. Native Planters in Old Hawai'i, pp. 21-26

   Handy. Ancient Hawaiian Civilization, pp. 113-121

9. Talk to a Horticulture teacher or science resource teacher in your district about the best location for the Hawaiian plants.

   See: Krauss. Creating a Hawaiian Ethnobotanical Garden available at the Lyon Arboretum.

10. Find information related to the following:

    a. How long does it take for the plant to mature?

    b. How much water does it need?

    c. What's the best fertilizer for the plant?

    d. How is the plant useful today?

LANGUAGE ARTS

1. Discuss the Hawaiian spiritual power called mana.

   Opening: Religion played a very important role in every aspect of Hawaiian life. The people believed that everything had mana (spiritual power) to some degree. They believed in the preservation of this mana, so religious ceremonies were an important part of every activity.

2. Allow time for the children to go to the corner to read legends about the various akua, 'aumākua and kupua (demigods) of early Hawai'i.

3. Encourage the children to share the stories they read with others by setting up a signup schedule of "Talking Time" when they can present a legend using drawings they've done.

4. Set up a writing corner with pictures of kāhuna, kū'ula images, or the god Kū or Lono and encourage the children to write their own legends.

5. Read: Pūku'i. Water of Kāne pp. 139-140 to the children.

   Ask:

   a. What story does this legend remind you of? (Biblical story of Adam)

   b. What is the function of each god in the story?

   c. How many gods did the Hawaiians have?

HEALTH

See:

a. Curtis. Life in Old Hawai'i, pp. 244-255

b. Early Hawaiian Life, pp. 205-206

c. Kāhuna Lā'au Lapa'au, pp. 31-43

6. Compare this training with that of today. How do doctors become "doctors"?

7. Study the kāhuna lapa'au

   a. When the children have completed their research on the kāhuna, direct their attention to the medical kāhuna.

   b. Talk about how the people of Hawai'i take care of medical problems today. Identify some of the common problems today that need medical attention. Write these on a wall chart in one column.

   c. Ask: How did the early Hawaiians take care of these same problems? Did they have kāhuna who took care of each problem or did one kāhuna take care of everything?

   d. Read from Early Hawaiian Life, p. 238 and introduce the medical specialty areas. Teach the Hawaiian equivalents.

MUSIC

e. Chant the "Ho'okupu Chant" for them, encouraging them to mouth the words as you chant and listen for similar patterns in the chant.

f. Teach the chant listening for accurate pronunciation as well as pitch.

g. Encourage them to memorize the chant.

h. Have the children think about activities of the Makahiki. Encourage them to create a second verse for the chant using as many Hawaiian words as they can recall. Use the kupuna as a resource person for translations.

2. Contemporary songs about plants and flowers of Hawai'i.

There are many songs that have been written by contemporary composers about the plants and flowers that were so useful to the early Hawaiians. Many of the flowers are compared to the beauty of loved ones. Some

ART

3 lengths of 20" long sennit ('aha)
coconut fiber for the ball
large needles

c. 3) Kilu:
coconuts cut in half
wire brush
instruments to remove flesh
sand paper to smooth the outside

2. Construct a Makahiki pole banner called an akua loa or Lono Makua.

a. Materials needed are:

1) Two long bamboo poles.

2) Two lengths of white muslin or the children may pound kapa using bark of wauke (paper mulberry), or 'ulu (breadfruit).

3) Feather pelts of birds; e.g. pheasant.

GAMES AND RECREATION

3. Participate in skill-building games found on pp. 28-43. Implements for these games are available in stores, Bishop Museum, district artifacts kits, Academy of Arts, or can be made by the children.

4. Teach the games for quieter moods in Mitchell's book pp. 55-66. Excellent instructions are given for each game. There are also clear instructions on how to make the material needed for some of the games. These implements can be made in art.

E.g.: Making the stem and drilling the hole for the kukui nut spinning top game called hu.

Coconut bowls for kilu.

Making the coconut loop and ball for pala'ie.

5. Organize the games so that competitive contests can be held after the children have learned the games.

SCIENCE

e. What will the leaves look like if there is no sun?

11. Experiment with changes in environment.

LANGUAGE ARTS

d. How many do different cultures have today?

e. Do all people believe that God created humans?

f. What do some scientists believe?

g. Why then were legends written or created?

6. If this lesson is being conducted during the months of October, November, December, or January, (these are the months of the early Hawaiian Makahiki or "harvest festival" which was a festival in honor of the god Lono) plan to hold a Makahiki in your school consisting of hula, Hawaiian games, and the re-enactment of the coming of Lono to each ahupua'a.

a. Inquiry:

Display the picture of the Lono pole in Early Hawaiian Life, p. 87.

Ask:

1) What do you suppose this was used for?

2) How was this made - materials, method of attachment?

3) What kinds of things can you tell me about the Hawaiians just by looking at this picture?

HEALTH

8. Read Malo. Hawaiian Antiquities, pp. 107-109 to the children.

These pages describe

a. The treatment of the sick.

b. The diet of a sick patient

c. The steps involved in the treatment of the sick.

d. The religious ceremonies, the process.

See: pp. 109-111 for religious prayers chanted during the treatment of diseases.

9. Discuss the life of the early Hawaiians and how they were so sensitive to their environment; how they utilized their environment to meet their needs.

10. Talk about the kahuna lā'au lapa'au - the herbal doctor.

a. Ask: What do you think the kahuna lā'au lapa'au used to cure some of the medical problems on our chart.

b. Discuss a few of the problems and have them make predictions based on their knowledge of the Hawaiian plants.

c. Read about some of the medical practices of the kahuna lā'au lapa'au in Gutmanis.

d. Have the children dramatize the role of the kahuna in curing

MUSIC

of these songs that can be taught are:

a. "Pua Aloalo" (hibiscus)

b. "Pua 'Ōlena" (turmeric)

c. "Pua Kukui" (candlenut)

d. "Nā Hala o Naue" (pandanus)

e. "Lei 'Ilima" (flower representing O'ahu)
See Hausman: Hawai'i Music in Its History, pp. 62-63

f. "Sweet Leilehua," (flower representing Hawai'i) Hausman. pp. 42-43

g. "Makalapua," Hausman: pp. 76-77.

The words underlined in the above list represent the flower in the song/title or the tree as in d.

ART

4) Wooden block from which Lono's head will be carved.

5) Ferns - woven or braided

b. See: Early Hawaiian Life, p. 87 for picture of Lono pole or Appendix V^C-B, pp. 174-175.

3. An art lesson can be done using the health lesson on illnesses. Have the children select one illness such as a person with a sore on the arm.

a. The child will draw the arm with a sore on it on the top half of a 12" x 18" sheet.

b. On the bottom half, he/she will get the part of the plant that was used to cure it and scotch tape the entire leaf, flower, etc., to the sheet.

c. Briefly describe the preparation of the herbal cure.

GAMES AND SPORTS

6. A few performers may be picked for demonstrations in an all-school Makahiki celebration or Hō'ike.

SCIENCE

LANGUAGE ARTS

4) What are some of your questions about this festival?

Record these questions on a chart.

b. Read and research the Makahiki Festival in:

1) Appendix Unit V^c-B, pp. 174-175
2) Curtis. Life in Old Hawaii, pp. 157-186
3) Dunford. The Hawaiians of Old, pp. 51-53, 142, 154
4) Handy. Native Planters in Old Hawai'i, pp. 329-388.
5) Malo. Hawaiian Antiquities, pp. 77, 143-151

c. Using Curtis' book, read and discuss pp. 157-186 together with the children.

Questions to answer:

1) What was the purpose of the early morning swim?
2) What kinds of gifts were given to Lono?
3) Describe the pole.
4) What were the men wearing?
5) What happens to all the gifts?

HEALTH

something like the ma'i hēhē (boil). Remind them of the use of rituals.

e. See also:

Aloha Council. Hawaiiana, pp. 54-97

Akana. Hawaiian Herbs of Medicinal Value

Culture Studies: Hawaiian Studies Project Data Cards

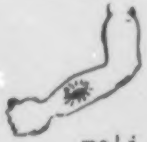
f. Encourage the children to ask their parents for medicinal cures as they remember them. Encourage them to compile their findings in a booklet.

11. Compare the Hawaiian medicines with those of other cultural groups. Learn the Hawaiian names of the plants and begin to identify new plants.

Illness	Hawaiian	Chinese	Japanese
debility	Make a tea of the hā'uī'uī leaves	Make a tea of tin kung chow/laukahi leaves	

12. Invite herbalists from different cultural groups to talk about medicines.

13. Visit a Chinese pharmacy in Chinatown or elsewhere and have the pharmacist discuss different medicines.

MUSIC	ART	GAMES AND RECREATION	
	E.g. 12"  ma'i hēhē 18" Laukahi Mash leaf with Hawaiian salt. Place on the boil and wrap with a clean lā'ī (ti leaf). (Mount specimen) The children may find and use endemic and/or introduced plants that have been used as medicinal herbs and plants.		

SCIENCE

LANGUAGE ARTS

6) What are some of the activities that took place during these early Hawaiian Makahiki?

d. Compare the Makahiki Festival with those of other cultures.

e. Have the children decide on the committees needed to plan for a Makahiki Festival.

E.g.:

Decorations
Invitations
Program
Props
Script
Staging

f. Have them select the committee on which they would like to serve. Stress the 'ohana concepts.

g. Encourage them to use positive communication techniques with each other.

h. Final presentation may be given to the whole school as a hō'ike.

HEALTH

14. As new discoveries are made, add them to the chart. Encourage the children to ask older folks about old cures. Record these and make a booklet for the class.

15. Hand out copies of Appendix Unit V^C-C, pp. 176-177. As the research continues, have the children fill in the blanks with the correct way of preparing the correct part of the plant for curing the ailment pictured.

    See also Appendix Unit IV-B, pp. 98-105 for additional information about key plants and their uses by the early Hawaiians.

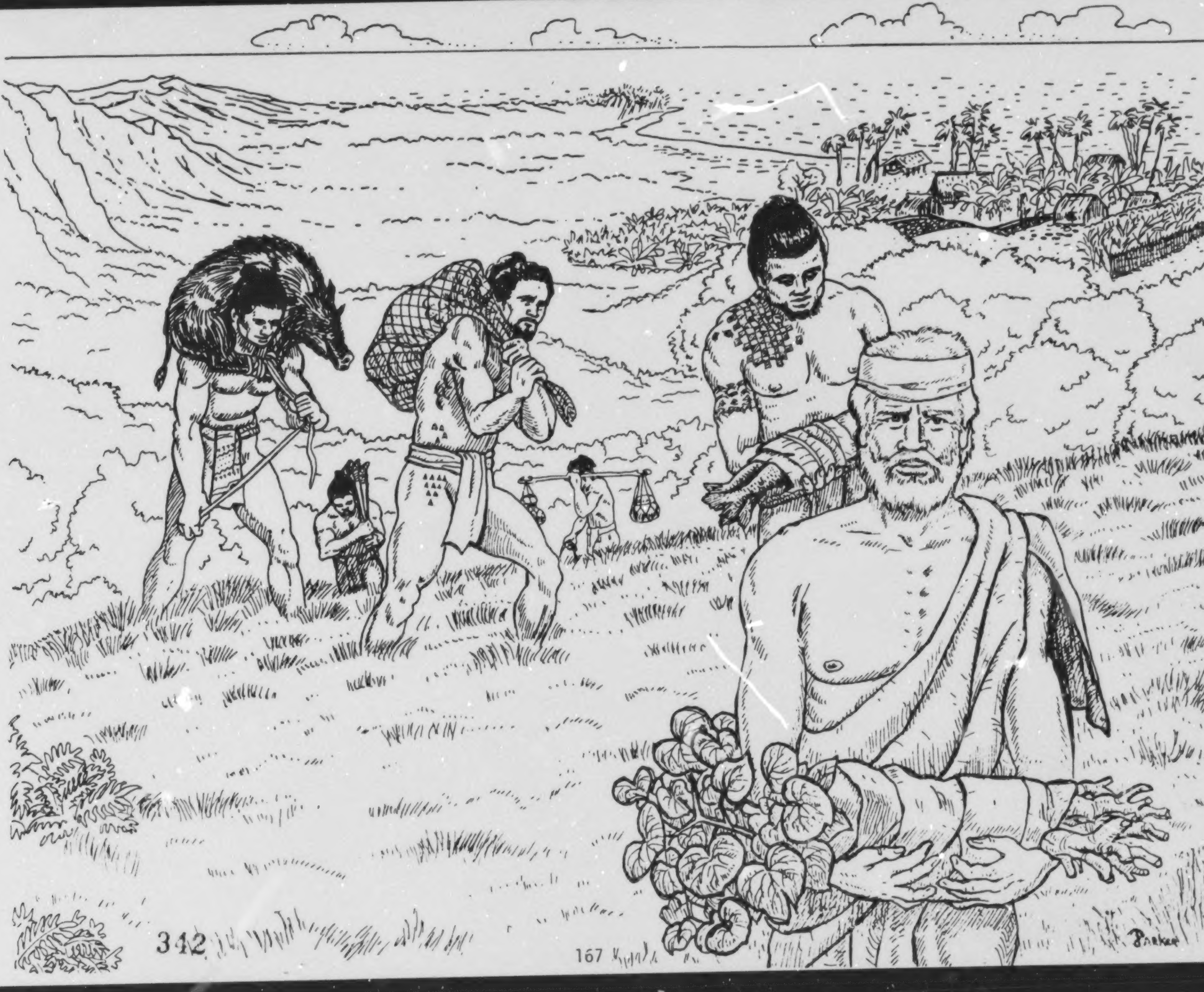
16. Introduce ho'oponopono - the Hawaiian system for "making right the wrong".

    See: Early Hawaiian Life, pp. 225-227.

    a. The kahuna lapa'au always asked a sick patient if ho'oponopono had been conducted to cleanse the inner self. Only then would the physical malady be treated.

    b. Practice using this system daily to solve problems in the class.

    c. For more information about ho'oponopono, see Pūku'i Nānā I Ke Kumu, Vol. I, pp. 60-70.



342

343

The following lessons were developed to accompany lessons found in Early Hawaiian Life, pp. 122-129, "Symbols of Royalty"

Grade 4, Unit V^{c}

SCIENCE

- Studying early Hawaiian birds whose feathers were used to make featherwork.

  The po'e kāwili, feather gatherers of early Hawai'i were trained very early in life to be good at their jobs.

1. Discuss the following:
   a. What did the po'e kāwili have to know about the birds?
   b. What did they teach the young people who were training to be po'e kāwili?
   c. Have you ever watched birds?
   d. What kinds of things have you observed?
   e. How many feathers can you pluck from one bird without endangering its life?
2. Read: Dunford. The Hawaiians of Old, pp. 123-126
   Encyclopedias about birds
   Handy. Ancient Hawaiian Civilization, pp. 135-139

   a. Have each student do a week of bird watching. Have them select a type of bird to watch. Look for eating habits, songs they sing, area they live in, when they're most active.

LANGUAGE ARTS

- Reading and discussing legends and stories about early Hawaiian featherwork.

1. See: Early Hawaiian Life, p. 127 for additional language arts activities.
2. Study the Hawaiian vocabulary below:

'ahu'ula	(cape, cloak)
kā'ei kapu	(sacred sash)
kāhili	(feather standard)
kahu hulu	(caretaker of feathers)
mahiole	(helmet)
nae	(net backing)
pā'ū o Nāhi'ena'ena	(skirt of 'ō'ō feathers made for Nāhi'ena'ena, daughter of Kamehameha I)
po'e kāwili	(bird catchers)

3. Have the children recall the story of 'Umi in The Eight Rainbows of 'Umi by Ku'ulei Ihara.
   a. Talk about the three symbols of royalty he took with him to seek out his father - King Liloa.
      1) Lei niho palaoa (whale tooth pendant)
      2) Malo (loin cloth)
      3) Lā'au pālau (war club)
   b. Show the children a picture of the feather sash and/or take them to the Bishop Museum to see it.

HEALTH

- The ali'i was a kapu figure of early Hawai'i. The kapu that surrounded him made it impossible for the maka'āinana to have much visual contact with him.

1. Discussion

   Have the children share their feelings of how they think they would feel if they heard that the ali'i was coming to their kauhale.
2. Show the children colored pictures of the ali'i dressed in their feathered finery. Have them imagine an entourage of ali'i entering their village and have them share how they would react.
3. Have the children recall Kamehameha or Aloha Week parades they have seen recently. Have them share their feelings based on today's culture and tell why the differences or similarities.

MUSIC

Songs of Hawaiian birds used in the making of featherwork.

1. The feathers of the koa'e bird were used to make the kāhili of early Hawai'i. See Unit V^C-D, pp. 178-179 for a picture of the koa'e bird. Have the children look into references for pictures of the native Hawaiian birds to see the colors of the birds.

   Teach the children "Koa'e E" after talking about the bird and its habits.

   Source: Hawai'i's Folksingers, LP Tradewind Records, Leo Nahenahe Singers.

2. "Manu 'Ō'ō" describes the honey-eater 'ō'ō as it sips the lehua nectar from the blossoms.

   See Elbert and Māhoe. Nā Mele o Hawai'i Nei, p. 77.

ART

See Early Hawaiian Life, p. 126 for art activities.

- Making featherwork is truly a high level skill. The following activities will build an appreciation of the effort and hard work involved in the featherwork of early Hawai'i.

  There are many resource people available in the community who can demonstrate and teach a variety of crafts. Send home a questionnaire sheet and ask the parents what their talents are and if they are willing to share them.

  1. Use DOE/OIS. Resource Units in Hawaiian Arts and Crafts.
     a. Pp. 62-66 - Kaula hau rope made from the inner bark of the hau tree.
     b. Pp. 106-119 - featherwork.
  2. Go on a field trip to Queen Emma Summer Palace to see the feather lei, kāhili, and other adornments of Queen Emma, wife of Kamehameha IV.
     a. Have the children think about the symbols of

MATHEMATICS

- Counting feathers in early Hawaii might have been done in a base 4 system of counting.

  The following inquiry lesson allows the children to make inferences about how one was rewarded for gathering and giving feathers to the ali'i. Was it by the number of feathers? If so, how were they counted?

  1. See Ihara. Research Materials, Bulletin Number 16, available in all school libraries and Bishop Museum (Appendix Unit V^C-E, pp. 180-181).
  2. Ask:
     a. How do you suppose the Hawaiians counted the number of feathers needed to complete a particular feathered article?
     b. Since only the ali'i were allowed to wear these symbols, what does that tell you about the value of feathers?
  3. How important then, is the accurate counting of feathers?
  4. Show the children the practicality of counting by this

GAMES AND RECREATION

- The following game can be taught to the children as the game reserved only for the ali'i. It can be used in the Makahiki Festival. (See language arts plan, pp. 162-164, 166.

  1. Shooting an 'iole (rat) with a bow and arrow was a sport engaged in only by ali'i.
     a. Have the children infer what these bows and arrows may have been made of.
     b. Encourage them to follow through with some research.
     c. Make the bows and arrows, including the 'aha (sennit) for tying.
     d. Set up a moving target and have them practice using a harmless arrow.
  2. Play act this game in the Makahiki.

Science

b. Have them also do research on their birds in books.

c. Have them take pictures or draw pictures and find out interesting facts about the usefulness of their birds.

d. Plan a sharing session so they can all display their findings and share the interesting points of their bird.

Language Arts

c. Have them infer the number of birds it took to make the yellow part of the kā'ei kapu and how long it might have taken to gather the yellow feathers.

d. Have them write a paragraph describing how 'Umi felt just before he ran into his father's court to tell him that he was Liloa's son. Have them use the Hawaiian vocabulary they learned in earlier lessons such as maka'u (scared).

Health

MUSIC

ART

royalty needed for the Makahiki as planned in language arts on p. 168.

MATHEMATICS

method by demonstrating why the Hawaiians used this method to count fish. Ask: Do you think that this method was practical for counting feathers?

(4) 4 ones = 1 kauna
(40) 10 kauna = 1 ka'au
(400) 10 ka'au = 1 lau
(4,000) 10 lau = 1 mano
(40,000) 10 mano = 1 kini
(400,000) 10 kini = 1 lehu
(4,000,000) 10 lehu = 1 poina
(40,000,000) 10 poina = 1 nalowale
etc.

5. It should be pointed out that these words have other meanings that relate to quantities or amounts. Mano also means "many, numerous, thick"; kini means "multitude, many"; lehu means "numerous, very many": and lehulehu means a "crowd"; poina means "to forget"; and nalowale means "lost, forgotten." These two latter number names refer to the immensity of the quantity that it cannot be remembered.

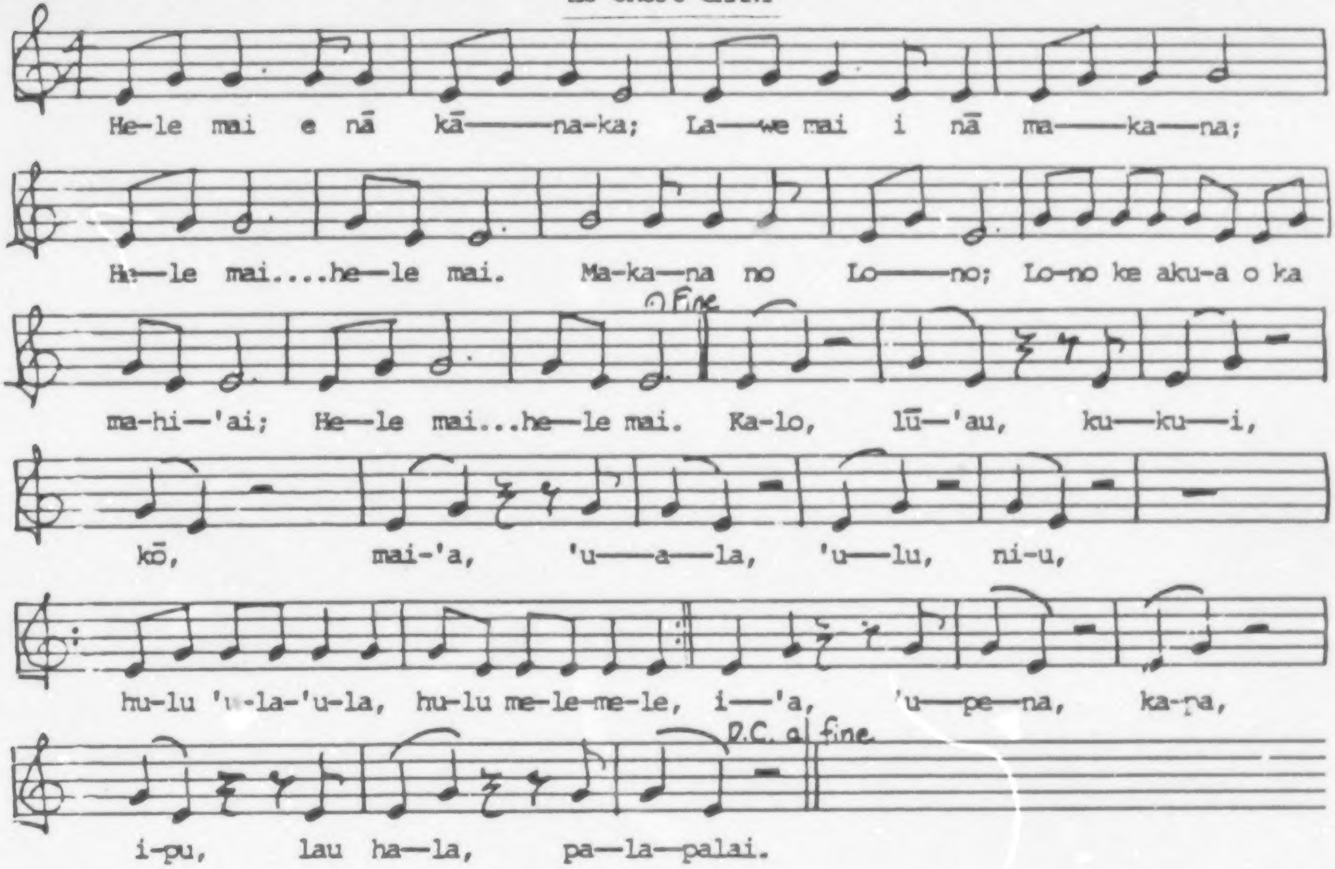
6. Share some of the stories from:

   Appendix Unit V^C-E, pp. 180-181.

MATHEMATICS

Have the children count objects in Hawaiian using this early Hawaiian system.

HO'OKUPU CHANT


He-le mai e nā kā——na-ka; La—we mai i nā ma——ka—na;
He—le mai....he—le mai. Ma-ka—na no Lo——no; Lo-no ke aku-a o ka
ma-hi—'ai; He—le mai...he—le mai. Ka-lo, lū—'au, ku—ku—i,
kō, mai-'a, 'u——a—la, 'u—lu, ni-u,
hu-lu 'u-la-'u-la, hu-lu me-le-me-le, i—'a, 'u—pe—na, ka-pa,
i-pu, lau ha—la, pa—la—palai.
Fine
D.C. al fine

Nā Haku Mele:

Composers: F. Ichinose, J. Holden, E. McClellan
V.M. Rosehill, C. Harbottle

Hele mai e nā kānaka	Come, people
Lawe mai i nā makana	Bring the gifts
Hele mai, hele mai	Come, come
Makana no Lono	Gifts for Lono
Lono ke akua o ka mahi'ai	Lono, the god of farming
Hele mai, hele mai	Come, come
Kalo, lū'au, kukui, kō	Taro, young leaves, kukui, sugar cane
Mai'a, 'uala, 'ulu, niu	Bananas, sweet potato, breadfruit, coconut
Hulu 'ula'ula, hulu melemele	Red feathers, yellow feathers
I'a, 'upena, kapa, ipu	Fish, nets, tapa, gourds
Lau hala, palapalai.	Pandanus leaves, ferns.

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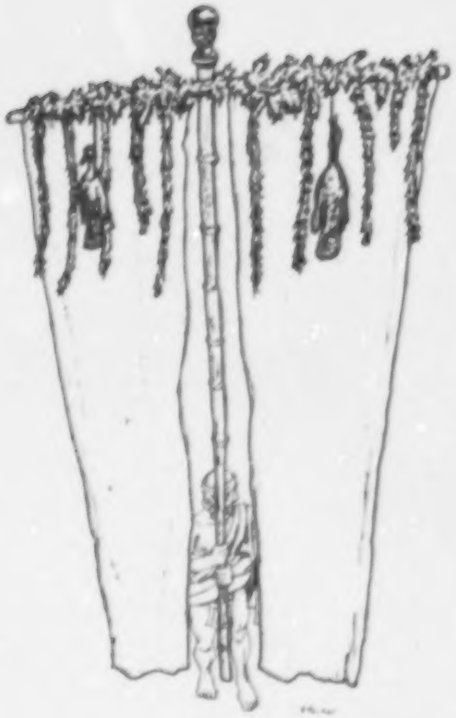
‘AUMAKUA

KA MAKAHIKI

by Māhealani Pescaia



Many people have celebrated a harvest festival. In Hawaii this was the Makahiki, literally "The-arrival-of-the-beginning" for it began with the New Year about the time of our October. During this four months' holiday, Lono alone of all the great gods was worshipped, for he was god of agriculture, god of the "over looking cloud" which watered crops. Because he was also god of peace, there was no war during Makahiki.

To give concrete expression of their thanks for prosperity in the year just past, every family prepared gifts - vegetable food, mats, kapa (tapa), nets, bowls, bunches of feathers - any good thing they had raised or made. At the beginning of the festival the kāhuna (experts, in this case, priests) prayed to the god Lono to send his spirit into a carved figure atop a strong pole. This pole was carried around the island to receive the gifts. From a crosspiece below the carving hung white kapa and other decorations such as birds and lei. Lono, the spirit residing in the carving, was carried around the island starting from the village of the ruling chief and proceeding around the island with the ocean on the left. In each district gifts were heaped before Lono - the gifts of every family in the district. After a prayer of thanks to the god, the pole was lowered and carried horizontally to the border of the next district where it was raised upright to receive more gifts. Meanwhile those gifts already given were carried to the village of the ruler who was considered the god's earthly representative. He distributed the goods among all chiefs according to rank. Some modern writers have spoken of this as tax collecting. It was that, but it was far more for it was infused with deep religious meaning.

When Lono had made a circuit of the island, the ruler went out in his canoe. By catching one fish he lifted the ceremonial kapu (tabu) against fishing which had continued while Lono journeyed. He returned to find his warriors drawn up as a guard about Lono. As the chief leaped from his canoe, he was greeted by one of the warriors who came running at him with two spears in his hands, both covered with white cloth at its tips. He hurled one of the spears at the chief but it was warded off by one of the chief's own men who was an expert in warding off spears. With the other spear, the warrior touched the chief with it. Later that afternoon the chief paid his respects to the Makahiki god, Lono-makua. Ceremonies and games marked the return of Lono to the village of the ruling chief. Among these was the shaking of the "net of Makali'i or Maolcha." The net was filled with food of all sorts such as taro (kalo), sweet potato (uala), bread-fruit (ulu), bananas (mai'a), and coconut (niu). It was lifted by four men, one at each corner, and shaken so that the foods dropped through the meshes. If the foods did not drop through, the kahuna announced that there would be famine in the land. But if the foods dropped through the net, this was a sign of plenty.

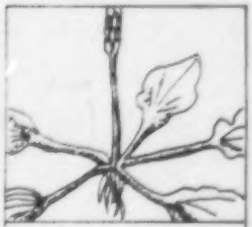
At last the Lono pole was returned to its resting place in the heiau, or temple. Lono was no longer in the little carved figure, but journeyed over the many-colored sea to his own island in the deep-blue of heaven. A little canoe was launched to accompany the god. The basket lashed between the canoe and outrigger was loaded with food for his journey.

Meanwhile in every district, games, hula and feasting followed the gift-giving. Makahiki was the great four month holiday of the year.

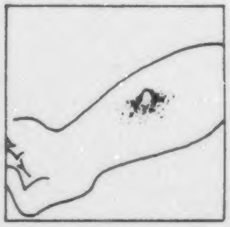
References: Handy, E.S. Native Planters of Old Hawai'i. Honolulu, Hawai'i: Bishop Museum Press, 1972, pp. 329-388.

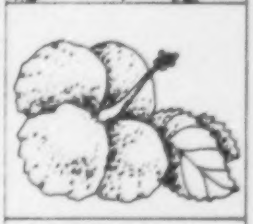
Malo, David. Hawaiian Antiquities. Honolulu, Hawai'i: Bishop Museum Press, 1976, pp. 141-159.

MEDICINAL PLANTS OF HAWAI'I

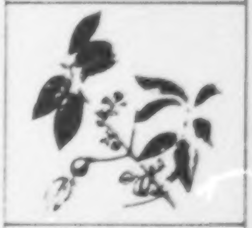


Laukahi

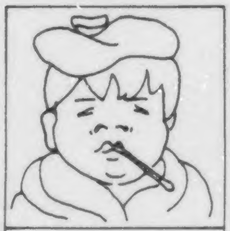


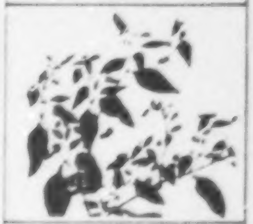


**(Hibiscus)
Pua Aloalo**

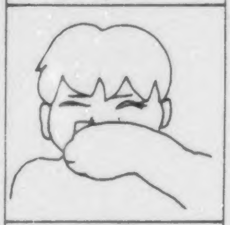


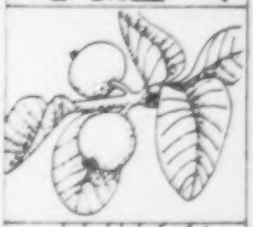
**'Ōhi'a'ai
(Mountain
Apple)**



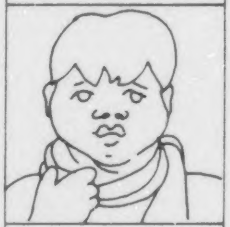


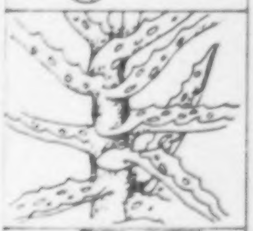
**Pōpolo
Leaves**



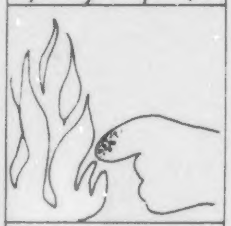


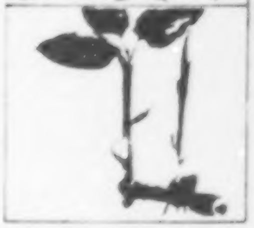
**(Guava)
Kuawa**



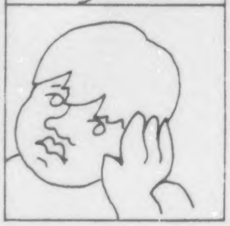


'Aloe/aloe





'Ōlena



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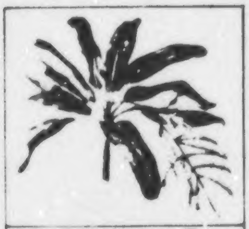
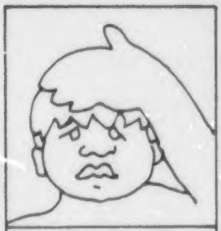
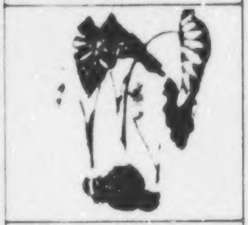
176

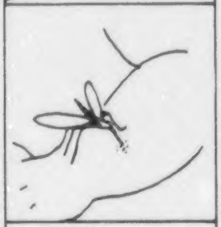


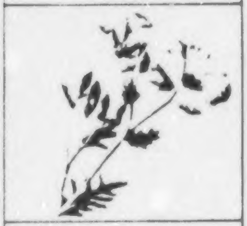
(Ti Leaf)
Kī



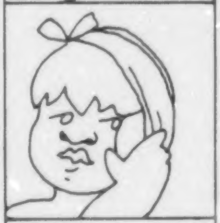


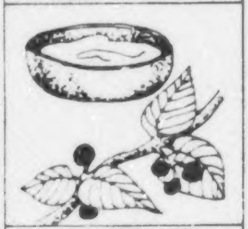
Kalo



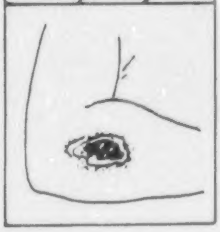


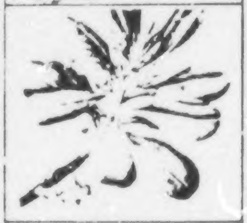
Puakala



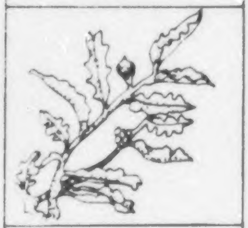


Poi
Pōpolo

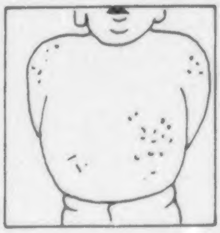


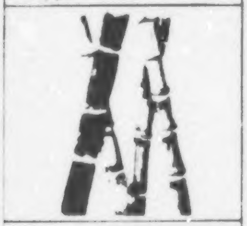


Naupaka
Kahakai

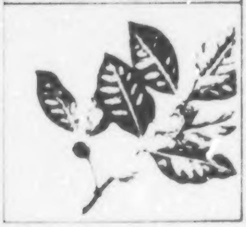


Limu Kala

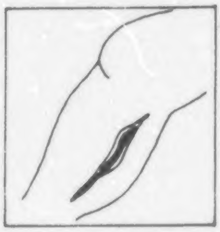




(Sugar Cane)
Kō

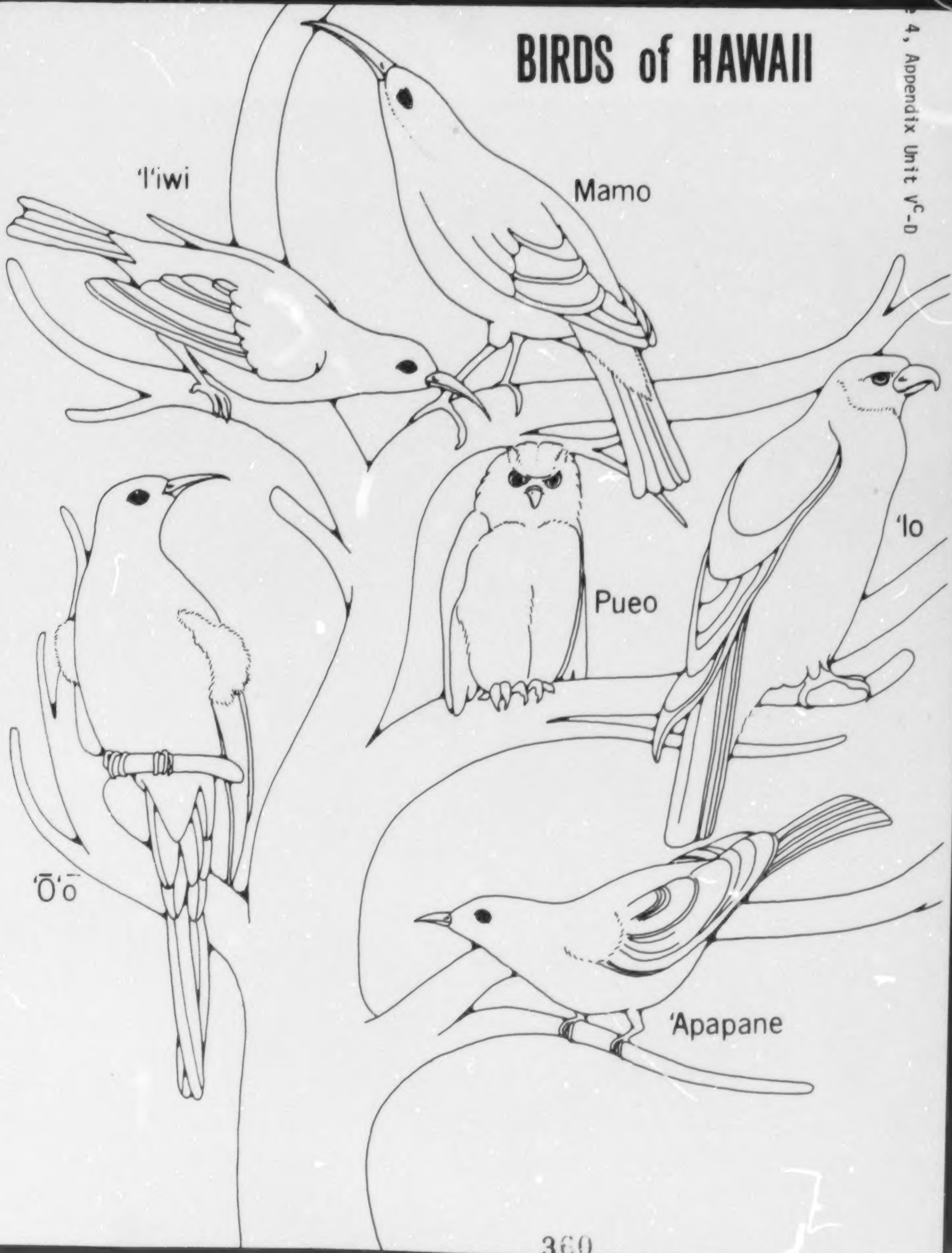


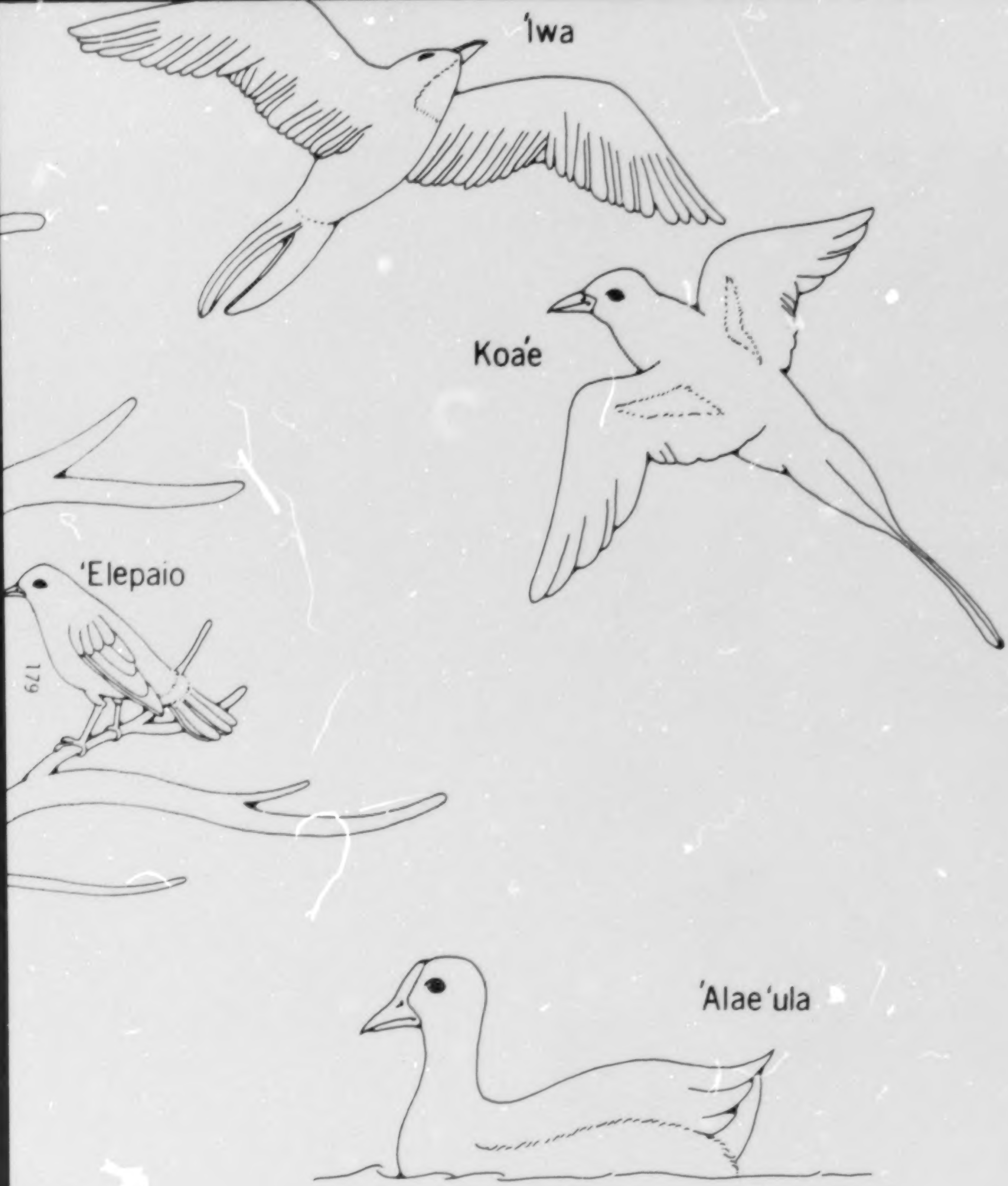
Noni



Explorations. Kamehameha Schools, 1977. 177

BIRDS of HAWAII


'I'iwi
Mamo
'Io
Pueo
'Ō'ō
'Apapane


'Iwa
Koa'e
'Elepaio
'Alae'ula

KA HELU HAWAI'I--HAWAIIAN ENUMERATION

The following "letter-to-the-editor" written in Hawaiian appeared in the January 21, 1867 issue of the Hawaiian newspaper, Ke Au 'Oko'a. The letter was translated from the Hawaiian by Mrs. Mary Kawena Pūku'i, emeritus associate in Hawaiian culture at the Bishop Museum.

This letter gives the example of how the Hawaiians also placed their numbers in units or groups, much like in the "new math" of the present day. The number four (4) was used for a very practical reason. A fisherman could hold four (4) fish by their tails, between the five (5) fingers of each hand. The farmer could also hold four (4) taro plants (huli) between the five (5) fingers of each hand. In the publication Hawaiian Herbs of Medicinal Value by Akaiko Akana, the instructions for compounding many of the remedies show much use of the number four (4) or multiples of four (4).

"In the old way ofenumerating here in Hawaii, four ones make a kauna, and after that it multiplies by four times ten with their names like this:

4 ones make a kauna - 4
10 kauna make a ka'au - 40
10 ka'au make a lau - 400
10 lau make a mano - 4000
10 mano make a kini - 40000
10 kini make a lehu - 400000
10 lehu make a poina - 4000000
10 poina make a nalowale - 40000000

and so on as usual.

"Our ancestors did not use the counting system of today that goes up to a hundred and so on. At the market at 'Ulakoheo and other places of trade, men and women and children are used to counting like that given above, for most of the fishermen are old men and those who buy are the young ones who have learned to count one by one to tens of thousands and so on, but cannot use their system lest the old folks do not understand.

"A few years ago, perhaps between 1860 and '63, E. Kuhia sent his servant from Maunalua with some fish, awa fish, a lau and about nine ka'au, for the king, who was living in Honolulu. He was not the king at that time. When the fishermen arrived at the chief's house, the chief asked, 'What have you?' 'I have fish from E. Kuhia, awa fish.' The chief asked again, 'How much fish?' The man answered, 'One lau and nine ka'au.' 'How much fish?' asked the chief again. 'How much fish?' he repeated, and the man answered the second time. The chief asked for the third time in the same words and was almost angry. Then the man changed it to the haole way of counting that was commonly taught in schools and said to the chief, 'Seven hundred and sixty fish.' When the man answered that way, he ceased to question for he was asking in modern terms and the man answered by the old count, like that given above.

"On the 31st day of December, 1866 while I was at the house of the Honorable person, the lover of chiefs, lover of the chiefs of Hawai'i-of-the-green-back, we discussed lands for leasing and while in the midst of it, a man arrived. Mr. Kekuanao'a asked him, 'What have you?' The man replied, 'I came to report the number of taro stalks for planting.' The chief asked, 'How many lau?' The man replied, 'I don't know how to count in Hawaiian.' Because the chief was still puzzled, he asked me, 'How many lau are there of the taro stalks he is talking about?' I said, 'Three lau, two ka'au and five kauna.' The chief said to the man, 'Why do you desert the old system of counting of our land? Why not do it in the new way and in the old way both? That was why I said to R. Armstrong not to stress the English and desert the Hawaiian speech. It was at a meeting at Kaumakapili in the year 1855, in the month of April, perhaps; there was a Christian Temperance Union meeting followed by a feast at the old palace.' So said the chief. The chief reminded me how the teachers do not teach the children the Hawaiian way of enumerating, as given above, and said, 'They are taught to memorize measures and multiplications and the system is found in the counting of our children.' The chief then ceased talking on the subject.

"Therefore, the way of counting which I am telling to the public is one much used by fishermen who catch flying fish, traveling mullet, mullet, and so on. They use the system mentioned above but very few counts go into the mano and kini because there has not been that many fish caught. If in the government building, clothing stores or other stores perhaps, they do not count in the old way but use the system of today. This I have to explain to you. May the patience of the editor and the printers place this parcel on our news bearers, the Au 'Oko'a."

J. H. Kānepu'u
Pālolo

Ihara: Research Materials Bulletin Number 16

The lessons in this unit were developed to accompany the lessons found in the 4th grade social studies guide, *Early Hawaiian Life*, pp. 130-147, Grade 4, Unit VI

CONTENT AREAS	EMPHASES
SOCIAL STUDIES	Identification of the food plants of early Hawai'i *Kalo* - *taro* *Niu* - coconut *'Uala* - sweet potato *'Ulu* - breadfruit *Pia* - arrowroot *Mai'a* - banana *'Uhi* - yam *Kō* - sugar cane Preparation of food Methods of cooking Utensils used Roles played by men, women, and children *Kapu* for men and women *'Ohana* concepts Cultivation of *kalo* Importance of the *kalo* Steps in planting Preparation of *poi* (early Hawai'i and today) Food sharing (exchange) system of early Hawai'i

LEARNER OBJECTIVES

See: Early Hawaiian Life, pp. 135-136, for more objectives.

- Names many of the foods eaten at a Hawaiian lū'au, or pā'ina and indicates why they were and are important nutritionally.
- Identifies all of the plants brought to Hawai'i by the Polynesians.
- Discusses how common Hawaiian foods are grown or produced and acquired.
- Describes some early cooking methods which are still in use.
- Discusses some of the differences in cooking methods available to the Hawaiians of former times and to people in modern Hawai'i.
- Discusses the kinds of plants that were grown in the different environmental zones from the seashore to the mountains.
- Discusses some of the beliefs and kapu connected with planting.
- Explains some of the aspects of the kapu system as it related to eating and food.
- Describes, using the food exchange system within the ahupua'a as a case study, how 'ohana and community members were dependent upon one another in Hawaiian society during former times.
- Discusses the food exchange system, the necessity for cooperation and working together on individual projects such as home-building, and the pulling together of the community in large numbers to provide labor for the chiefs and konohiki for large-scale projects. (kōkua, laulima, alu like, lōkahi)
- Recognizes that the Hawaiian food exchange system was based on sharing and giving and receiving, instead of trade or barter, which stemmed from motives of practicality, sympathetic interest in general welfare of the scattered 'ohana and as a matter of self-respect.
- Explains using both early and modern Hawai'i as a case study, how economic resources are allocated and utilized to satisfy the people's basic needs and wants.

APPENDICES

CONTENT AREAS	EMPHASES
SCIENCE	Differences and similarities in farming methods Early Hawai'i vs. Modern Hawai'i *Kalo* vs. Watercress Scientific knowledge involved in early Hawaiian and modern Hawaiian agriculture Importance of *wai* (water) to the early Hawaiians and today's communities in Hawai'i is reflected in the: Development of communities Development of conservation techniques Continuous study of the hydrologic cycle in Hawai'i
LANGUAGE ARTS	Creative writing - Poetry dealing with the Cultivation of *kalo* (*taro*) Appreciation of *wai* (water) Place names - Studying the importance of Place names that begin with "*wai*" or have "*wai*" in them Places where "*wai*" is located

LEARNER OBJECTIVES	APPENDICES
• Describes how the lo'i kalo terracing system was established in a typical valley environment. • Discusses the importance of water to the Hawaiian mahi'ai (farmer) in pre-contact times. • Explains some of the problems that modern day kalo farmers are facing that were not faced by most farmers in former Hawaiian times. • Recognizes the fact that the Hawaiians cultivated many different species of kalo (taro) and discusses some of the reasons why so many different types might have been developed by Hawaiian farmers. • Compares a day in the life of a Hawaiian farmer or fishers in former times with that of a modern farmer or fisher. • Relates how the Hawaiians adapted foreign materials and technology to their needs when these things became available. • Describes the way of life of the early Hawaiians as a result of adaptation to the environment. (See Science in Hawaii, A Fourth Grade ETV Guide, pp. H1, H2, and K1 for concepts and objectives dealing with "Hawai'i's Water Resources" and "Science and Technology of Crop Production.")	
• Relates how aspects of the natural Hawaiian environment provided images and topics for the composers of Hawaiian poetry (mele) in former times and even today. • Writes prose or poetry in English, using Hawaiian words and expressions where appropriate, expressing the student's feelings about Hawai'i, Hawaiian food, music, dance, people and history. • Researches and reports information concerning natural, legendary, and/or historical events which have been commemorated with place names.	Unit VI - A "Maika'i, Mahi'ai," pp. 196-197

CONTENT AREAS	EMPHASES
HEALTH	Medicinal value of Hawaiian plants Early Hawaiian uses Modern day uses by various ethnic groups Illnesses of the early Hawaiians and of the Hawaiians today
MUSIC	Creative compositions Lyrics written by the children and taught by them using the 'ukulele, autoharp and/or guitar Songs about wai (water) "'Alekoki" "Hanohano Hanalei" "Ka Ua Loku" "Kōkohi" "Old Plantation" "Wai O Ke Aniani"
ART	Early Hawaiian arts and crafts using Hawaiian plants Lā'ī, Kī - tī leaf, tī plant Niu - coconut Kukui - candlenut 3-D art using the collage or diorama approach Water color painting

LEARNER OBJECTIVES	APPENDICES
• Classifies, within a Hawaiian, scientific, or some individual taxonomy, flora and fauna found during nature study excursions in the different environmental zones on the islands from the beach areas to the uplands. • Describes the way of life of the early Hawaiians as a result of adaptation to the environment. • Describes the ethnobotanical uses of plants by the Hawaiians including food, medicine, dyes, shelter, tools, weapons, ornaments, religious and social rites. • Practices behavior that illustrates respect for self, schoolmates, teachers and community resource people. • Contrasts factors in the local environment which presently affect health and safety with factors that existed in the environment in former times.	Unit VI - B Worksheet - Medicinal Uses of Plants, pp. 198-199
• Creates melodies and lyrics concerning a Hawaiian theme using English and Hawaiian words, expressions, and phrases. • Sings selected Hawaiian songs introduced by the teacher while playing rhythmic instruments. • Works with partners or groups on Hawaiian language and/or culture oriented activities such as an oral presentation, a bulletin board display, an Aloha Week/May Day pageant, or Makahiki Festival. • Practices behavior that illustrates respect for self, schoolmates, teachers and community resource people.	
• Describes the ethnobotanical uses of plants by the Hawaiians including food, medicine, dyes, shelter, tools, weapons, ornaments, religious and social rites. • Describes how availability of certain materials and paucity or lack of other materials directly affected the development of many elements of Hawaiian material culture.	

CONTENT AREAS	EMPHASES
FOOD AND NUTRITION	Nutritional value of plant foods Variety of uses of *kalo* (*taro*) Eating patterns of Hawaiians today Effect of cooking on the nutritional value of foods
GAMES AND RECREATION	Creative movement Dramatization of the steps in planting *kalo*

LEARNER OBJECTIVES	APPENDICES
• Compares the eating habits of many Hawaiians today who eat American food with high fat and refined sugar content and low fiber content with the eating habits of Hawaiians of former times who ate generally a vegetable diet supplemented by seafoods and occasionally meat protein. • Identifies some of the health problems of many Hawaiians today as reported by the Department of Health and investigates to see which ones may be related to eating habits, food eaten, excessive use of salt, or being overweight. • Names many of the foods eaten at a Hawaiian lū'au, or pā'ina and indicates why they were and are important nutritionally. • Discusses some of the differences in cooking methods available to the Hawaiians of former times and to people in modern Hawai'i.	Unit VI - C Nutritional Value of Hawaiian Plant Foods, pp. 200-201
• Performs more advanced or complicated body movement patterns in games and dances.	Unit VI - D "Huki I Ke Kalo", p. 202

The lessons in this unit were developed to accompany the lessons found in the 4th grade social studies guide, Early Hawaiian Life, pp. 130-147,

Grade 4, Unit VI

SCIENCE

See: Early Hawaiian Life, p. 145, for other suggested science activities.

- The following ETV telecasts can be used in the study of taro cultivation in which water is so important.

  See: Science in Hawai'i, A Fourth Grade ETV Guide. Two units are appropriate for the study of the kalo plant and other plants of early Hawai'i.

  1. "Science and Technology of Crop Production, Old and New," pp. K1-K9.

     a. This lesson may be used to answer the questions found in Early Hawaiian Life, pp. 140, 142-143.

     b. This unit explores the scientific knowledge required in agriculture and presents a comparative study of the "old and new" methods of scientific farming.

     c. The unit includes pre- and post-telecast activities including suggested field trips.

     d. Study the Hawaiian vocabulary and include them in activities as much as possible.

     e. Check the ETV schedule for program time. Individual program

LANGUAGE ARTS

See: Early Hawaiian Life, p. 145, for suggested activities in language arts that correlate with the social studies and science activities in this unit.

- Additional fun activities in language arts dealing with the planting of kalo.

  1. Have the students learn some vocabulary words dealing with the mahi'ai (farmer).

     See: Appendix Unit VI-A, pp. 196-197.

     The kupuna (grandparent) in your school is an excellent resource person to do this lesson.

  2. To promote creativity:

     a. Have the children think of a familiar tune like "This Is the Way I Brush My Teeth."

     b. Using this tune have them write new lyrics for the song using the steps in planting kalo or preparing poi as the theme.

        E.g.: This is the way we kanu i ke kalo (plant the kalo)
        Kanu i ke kalo
        Kanu i ke kalo
        This is the way we kanu i ke kalo
        I kēia kakahiaka (this morning)

     c. To translate the English words to Hawaiian, refer to the kupuna in

HEALTH

- An important part of the study of early Hawaiian plants involves the medicinal value. As the study of useful Hawaiian plants continues in Early Hawaiian Life, p. 144, an on-going study can take place in health on the medicinal uses of first the kalo plant and then other plants and herbs.

  See: Unit V^{C}, p. 158, health, for activities. Scrapbooks of the medicinal plants may be made in health class.

  1. Using worksheets showing the illness, (see Appendix Unit VI-B, pp. 198-199) have the children discover or research the remedy by using reference books or resource speakers.

     Books to use:

     See Unit V^{C} p 158 under the content area of language arts for a list of references.

  2. Encourage the children to ask their parents for ethnic cures. Compare Hawaiian medicines with those of other ethnic groups. Analyze similarities and differences.

     E.g. Sketch a picture of a person with a headache. Leave enough space below the picture to write the correct cure after the research is done.

  3. Describe, research and study the other uses of plants such as for dyes, houses, tools, weapons, special rites in social studies if the interest of the children is high.

"Food - Agriculture."

MUSIC

The following activities were developed to encourage children to compose songs of their own about kalo, wai (fresh water) or any subject dear to their hearts.

See: Early Hawaiian Life, p. 145, for suggested activities in music.

1. Review the songs and chants the children have learned in earlier grades about kalo or poi. See: Appendix Unit VI-D, p. 202 for the chant, "Huki I Ke Kalo."

2. Using the original lyrics composed in language arts, encourage the children to decide upon a melody (original or borrowed) or set of tones to which their composition can be set and taught to the other students.
   a. Have them write out their lyrics on a chart which they will use to teach their classmates.
   b. If they are able, they can teach 'ukulele chords to the class and accompany themselves on the 'ukulele, autoharp or guitar.
   c. This is a good opportunity to bring out the Hawaiian 'ohana concepts of:

aloha	(respect)
alu like	(working together)
laulima	(cooperation)

ART

See: Early Hawaiian Life, p. 146 for art activities. The resource books listed there are available in bookstores, public libraries and at the Kamehameha Schools bookstore.

Another excellent reference is DOE/OIS. Resource Units in Hawaiian Arts and Crafts which should be available in every elementary school library. The guide contains details and illustrations on how to make a variety of Hawaiian arts and crafts. This guide is available through inservice by the Ho'onani Artmobile staff of the Office of Instructional Services.

Another reference is Mitchell. Resource Units in Hawaiian Culture, Units 9 and 10, pp. 110-145.

FOOD AND NUTRITION

- After studying poi preparation in social studies, Early Hawaiian Life, p. 141, study the food nutrients and how they help the body.

See: Appendix Unit VI-C, pp. 200-201 for a chart showing the nutritional value of kalo, poi, 'ulu (breadfruit) and 'uala (sweet potato), four important staples of the Hawaiian diet.

1. Have the children study the nutritional information.

2. Encourage them to compare the nutritional value of each food.

3. Consider inviting a guest speaker from the Department of Health, UH College of Tropical Agriculture and Human Resources or the DOE Nutrition Education staff to talk about the importance of poi as baby food for babies with certain allergies.

4. Read: Handy. Native Planters of Old Hawai'i, pp. 113-115. An interesting account of preparing poi is given by Mary Kawena Puku'i in her recollections of her childhood in Ka'ū, Hawai'i.

5. Have the children design experiments to preserve poi or pa'i'ai. Experiment

GAMES AND RECREATION

- The following activities are a means of introducing the children to the physical endurance required by people involved in kalo cultivation.

See: Appendix Unit VI-D, p. 202 for words to the chant, "Huki I Ke Kalo."

1. See your school kūpuna about teaching this chant. He/she may have the chant on tape.

2. Go on a field trip to a lo'i kalo (taro patch) or a māla 'ai (taro garden).

3. If the situation can be arranged, request that the cultivator allow the children to participate in some of the activities relating to taro cultivation.
   a. See: Early Hawaiian Life. p. 142 for activities in which the children could involve themselves. These could include:
      1) Cleaning and damming the 'auwai (ditch).
      2) Softening the lepo soil with the 'ō'ō (digging stick).
      3) Stamping the soil after water has been added to the patch.
      4) Planting the huli.

SCIENCE

tapes are available at the ETV office at Mānoa Elementary School. Call two weeks in advance at 988-2117, or send in a request form found in TV for Viewing.

2. View Science in Hawai'i, A Fourth Grade ETV Guide, "Hawai'i's Water Resources," pp H1-H12.
   a. Since water plays such a significant role in the production of kalo, the students should be made aware of how Hawai'i gets its water supply.
   b. The study of Hawai'i's hydrologic cycle is an important part of this unit.
   c. The children will have a good chance to realize the importance of conservation.
   d. Use "Nā Ki'i Ho'ona'auao" charts to locate places mentioned in the telecast. See Science in Hawai'i, A Fourth Grade ETV Guide, p. H3.
   e. Use the kupuna to introduce the vocabulary in Hawaiian, especially that of the animals that lived in the streams such as those listed in Science in Hawai'i, A Fourth Grade ETV Guide, p. S3. The kupuna can share his/her experiences about catching, preparing and eating these animals.

LANGUAGE ARTS

your school or to any knowledgeable grandparent in the community. Encourage the use of the Hawaiian terms. Pūku'i's Hawaiian Dictionary is also an excellent reference to use.

3. Present some Hawaiian riddles and wise sayings about taro and other plants.

   See:

   Kamehameha School's Ho'omāka'ika'i/ Explorations 1981, pp. 46-66.

4. Go on a field trip to a nearby stream.
   a. Have the children listen to the water and the sounds around them.
   b. Have them write short poems or haiku about wai (water). Encourage them to use words relating to the senses.
   c. Have the children illustrate their poems, similes or haiku. Use felt pens or charcoal on white paper. Encourage them to include aspects from the environment.
   d. Share the poems with other classes.

5. Language development
   a. Using Science in Hawai'i, A Fourth Grade ETV Guide, p. H3, have the children look up the place names in Pūkui's Place Names of

HEALTH

4. Compare the life span of Hawaiians of today with those of early Hawai'i.

   Ask:

   a. What kinds of illnesses did the early Hawaiians suffer from? What do they suffer from today?
   b. Why are there so many Hawaiians dying from cancer and heart disease?
      1) Encourage the children to predict a list of causes.
      2) Conduct research. Call the Cancer Information Center for resource speakers.

5. Plan a field trip to Waimea State Park or a similar state park on your island.
   a. They will introduce the children to the flora and fauna found in the typical ahupua'a.
   b. The children should be able to recognize the plants and tell their uses.
   c. Encourage the children to discuss how the Hawaiians developed a way of life as a result of adaptation to their environment.
   d. On the field trip, encourage the children to practice the 'ohana

MUSIC

Also see Early Hawaiian Life, pp. 208-227.

3. See: Elbert and Māhoe. Nā Mele o Hawai'i Nei for some songs about "wai":

   a. "'Alekoki," pp. 32-33.

      1) Select three to four of the nine verses for the children to learn. E.g. Verses 1, 4, 7, 9.

      2) 'Alekoki is the name of one of the ponds in Nu'uanu. The song also mentions Kapena Falls and Māmala or Honolulu Harbor.

      3) Go on a field trip to see where 'Alekoki and Kapena Falls are located to see the abundance of wai.

   b. "Hanohano Hanalei," p. 41.

   c. "Ka Ua Loku," p. 62.

   d. "Kōkohi," pp. 66-67.

   e. "Old Plantation," pp. 83-84.

   f. "Wai O Ke Aniani," pp. 93-94.

ART

To improve upon the children's skills in creating a picture that expresses feelings reflecting the five senses, have them take their sketches of the stream environment done in the language arts lesson 4 on this page and develop them into 3-D presentations. This may be done through the collage techniques or through the diorama approach. The children may elect to do a group mural using the collage technique. If necessary, a second viewing of the video cassette "Hawai'i's Water Resources" (see science lesson on this page) may be shown. The children will see more elements to include in their art work.

Display the finished products in the cafeteria, library or office.

FOOD AND NUTRITION

by freezing poi and pa'i'ai and see how they turn out after a few days.

6. Name the different methods of preparing kalo. Ask the children to bring in recipes.

   E.g. a. Taro chips
   b. Poi
   c. Lū'au leaf
   d. Laulau
   e. Muffin
   f. Mochi
   g. Kūlolo

7. Talk about the kapu related to eating poi.

   E.g. No arguments or disagreements were allowed during mealtime when the poi bowl was uncovered on the table.

8. Study the nutritional value of other plant foods eaten by the Hawaiian people to determine the health status of an early Hawaiian. Include a study of their drinking water and another kind of liquid intake such as coconut water.

GAMES AND RECREATION

b. The purpose of such an encounter is to help the children appreciate the physical conditioning of the Hawaiians.

Generalizations:

The Hawaiians had to work very hard to provide food for themselves.

They made full use of their environment to meet their need for food.

They had to be in good physical condition to do the work of planting kalo.

SCIENCE

LANGUAGE ARTS

Hawai'i. Motivate an interest in learning more about these places by encouraging research in Hawaiian books. Stress the history of the area and its significance.

b. Using the same reference, have the children name as many place names that begin with or have the word "wai" in them.

E.g.
Ala Wai
'Auwaiolimu
Hipawai
Honokōwai
Huawai
Kahuwai
Kawaiaha'o
Kawaihae
Kawaihau
Kawaiku'i
Kawaili'ulā
Kawailoa
Kawainui
Kepaniwai
Luawai
Luahinewai
Mānawainui
Maunawai
Moanawai
Muliwai'ōlena
Nālimawai
Nāwaihulili
Piliwai
Pu'uwaihu'ena
'Umiwai
Wai'ale'ale
Waialua
Waikīkī
Wailua
Waimea

HEALTH

concepts such as:

kōkua
lōkahi
aloha
laulima
kuleana
alu like

6. Have the children investigate those factors in the local environment of today and in early times which have affected health and safety.

a. Effects of dietary changes.

b. Effects of tobacco smoking and drinking of alcoholic beverages (as opposed to the drinking of 'awa).

c. Effects of pollution in the air and in sources of fresh water.

d. Effects of changes in living conditions relating to fire hazards, sanitation, disease controls, etc.

Stress to the children that some changes have been for the better, while others have been for the worse.

Have the children report on the results of their investigations.

MUSIC	ART	FOOD AND NUTRITION	GAMES AND RECREATION
4. Encourage the children to look around them and select a waterfall, or pond, or stream to describe poetically. Having sung several of the songs listed under activity #3, have them compose the music for their poems. They can sing their tunes on a tape and the music resource teacher may be tapped to help transpose the songs on to music notation sheets. 5. Share these compositions with other classes.	Have the children paint a picture of the location of their waterfall, pond or stream. Encourage them to do this painting on location so that they will include the flora in the area. Set up a bulletin board display of their paintings along with their poems.	9. Discuss and study the food intake of people in Hawai'i today. a. Call in a speaker from the Department of Health to discuss the health of the Hawaiians today. b. Compare the health of the Hawaiians with other cultural/ethnic groups. 10. Compare the eating habits of Hawaiians today with those of early Hawai'i. 11. Compare and discuss the method of food preparation and talk about what happens to nutrients in various methods of cookery. E.g. Boiling vs. steaming Frying vs. baking	

"Maika'i, Mahi'ai!"

In Hawai'i long, long ago there lived Mahi'ai, a keiki kāne. He had an 'ohana just as you do. But in his 'ohana were his two older brothers, two younger sisters, his makua kāne, makuahine, kupuna and many aunts, uncles and cousins. Some of his 'ohana lived near the lo'i kalo (taro patches). Some lived near the kahakai (beach).

Mahi'ai and his family rose early each morning starting their day's activities while it was cool. Today was special because Mahi'ai's makua kāne (father) was going to let him join all the other men and older boys. They were going to work in the lo'i kalo. He no longer needed to stay with his sisters. He could help in the kalo patch just like Kekoa and Keola, his older brothers!

Mahi'ai was the first one ready to go because he was too excited to sleep and had gotten up very early. Everyone had fun yesterday trampling in the mud of the lo'i. Now, it was planting day for men and older boys only. Mahi'ai raced ahead toward the field. Today Mahi'ai was not the water-carrying keiki but a working kāne!

When they all got to the fields the leader of the planting offered a prayer to the gods. He prayed that they would help the young kalo plants grow big and strong. He prayed that they would be able to harvest a good crop. After the prayer the workers began planting. Mahi'ai's makua kāne told him that his job was to bring the huli (plant cuttings) to the men who would plant them in straight rows. Mahi'ai had to run along the lo'i kalo with the bundles of huli and pass them to the planters. At first Mahi'ai ran, moving very quickly. As the sun rose higher in the sky, the day became warmer and warmer. Mahi'ai grew more and more tired. He took a sip of water from the water gourd making sure not to drink more than his share. His father and brothers needed a drink too.

Everyone kept right on working and it seemed to Mahi'ai that they did not slow down. He did not know how long he could keep up but he knew that he could not stop or his brothers would see how tired he was. His father might not let him work in the fields with them anymore. Auē! Just when he thought he could not lift another bundle he saw his sisters come with their lunch. Everyone stopped to eat! 'Ono! Mahi'ai was so hungry! After eating, he felt like sleeping. But everyone went quickly back to work. Mahi'ai watched his sisters walking back toward the kauhale and for a minute wished he could go with them. They would probably go to the beach for a swim or play in the stream among the rocks.

"Hele mai, Mahi'ai!" Keola was waiting for more huli. Auē! Mahi'ai gathered up his bundle of huli and ran toward his brother.

At long last, the planting was finished. Mahi'ai was not sure he could walk home. He was exhausted! His brother Kekoa saw his dragging footsteps and hoisted him upon his shoulders. "Maika'i, Mahi'ai!" "You worked well today." Mahi'ai felt a burst of pride but he was too tired to say anything and promptly fell asleep atop his brother's shoulders.

"Mahi'ai, Mahi'ai, it's time to eat," said Keola. Mahi'ai awakened and hurriedly went to the hale mua where all the other men of the 'ohana were gathered. Once inside the hale mua, the men's eating house, Mahi'ai's makua kāne offered a prayer to the 'aumākua asking for help to make the kalo plants grow well and thanking them for the fine planting day. This was Mahi'ai's first meal with the men. He felt so proud; he no longer needed to eat with the women and younger children.

After eating, Mahi'ai needed to help clean the eating utensils (bowls, cups, spoons). He put them away and ran to the hale noa. Each night his job was getting the kukui nuts on the ni'au (coconut mid-rib) and placing the ihoiho kukui in the stone holder. By candlelight he heard his kupuna kane (grandfather) tell stories of the 'ohana, powerful gods and great ali'i. Soon it was time to sleep. Mahi'ai put out the light and went to sleep. He slept smiling as he remembered his brother's praise, "Maika'i, Mahi'ai!"

MEDICINAL USES OF PLANTS:
Sample Worksheet

Where grown?

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Medicinal Uses:

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Other Uses:

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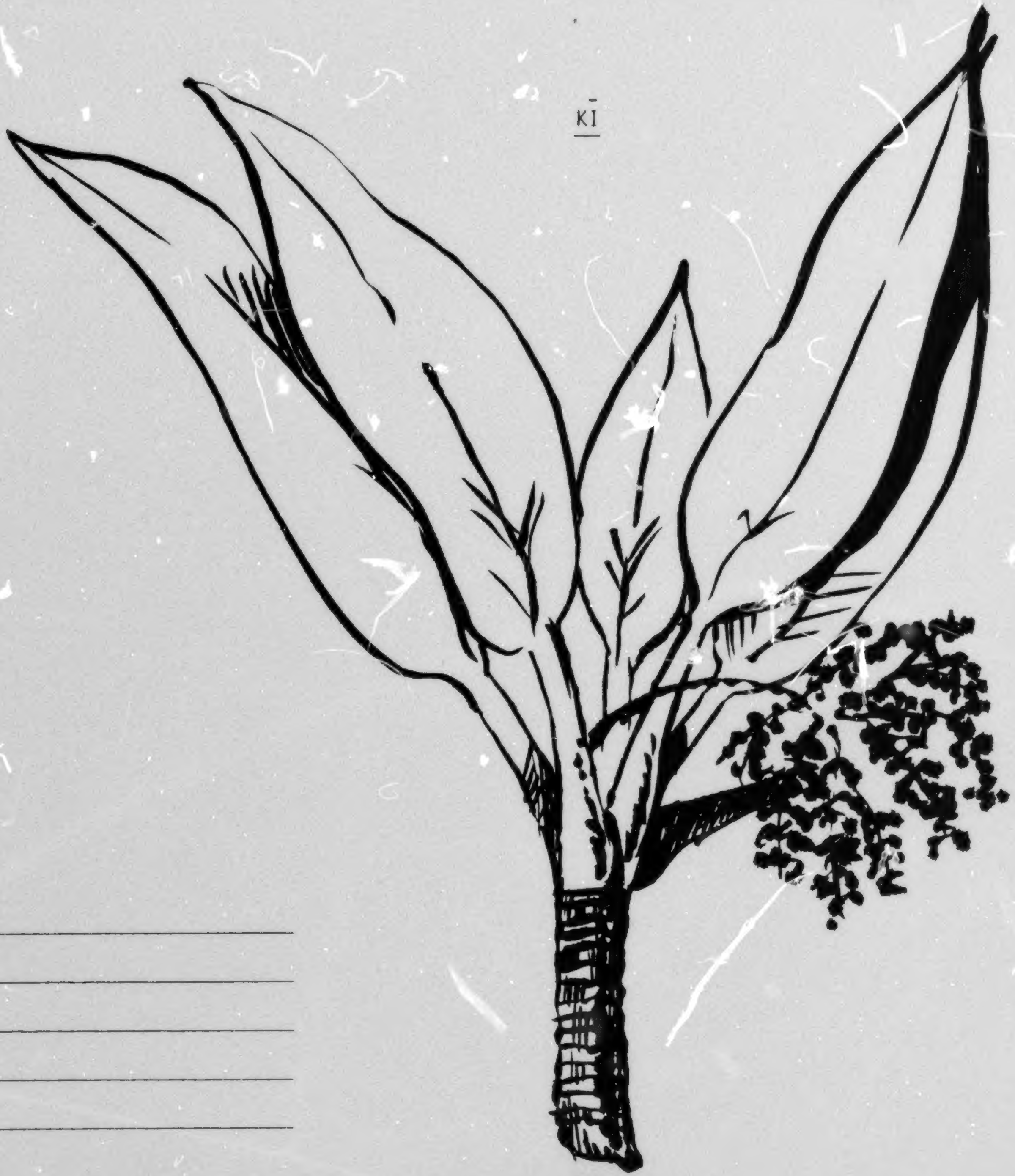
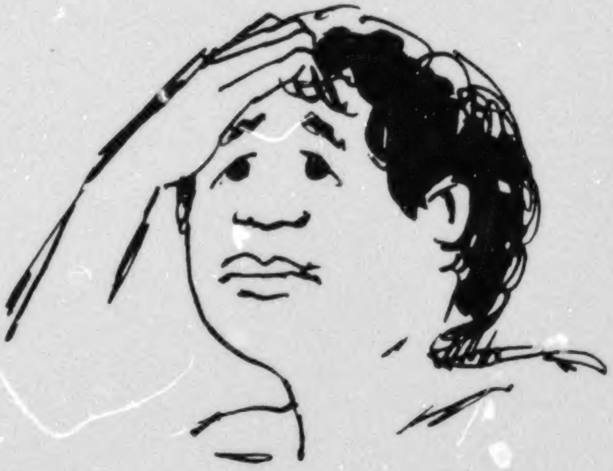


MEDICINAL USES OF PLANTS
Sample Worksheet



FEVER

Plant Name: ______________

Description: ______________

____

____

Medicinal Uses: ______________

____

Other Uses. ______________

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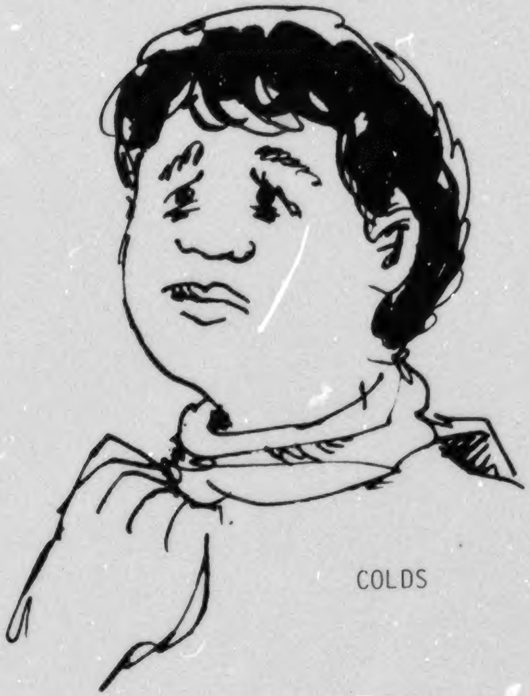

COLDS

Plant Name: ______________

Description: ______________

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Medicinal Uses: ______________

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Other Uses: ______________

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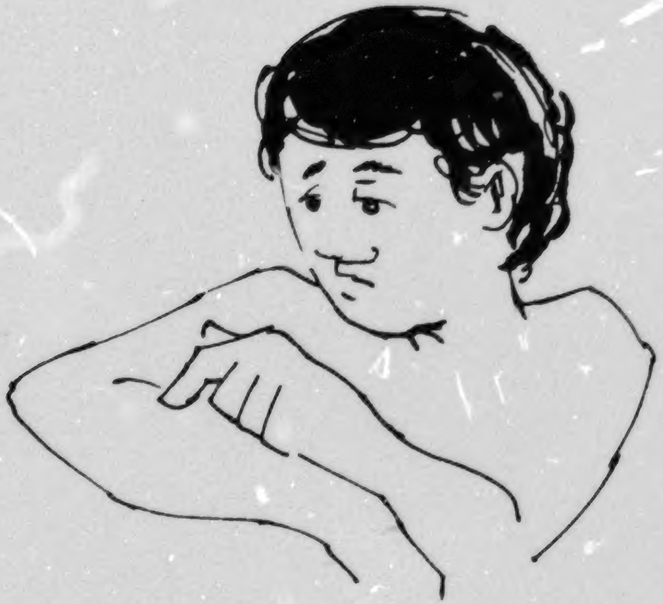

INSECT BITES

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Description: ______________

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Medicinal Uses: ______________

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Other Uses: ______________

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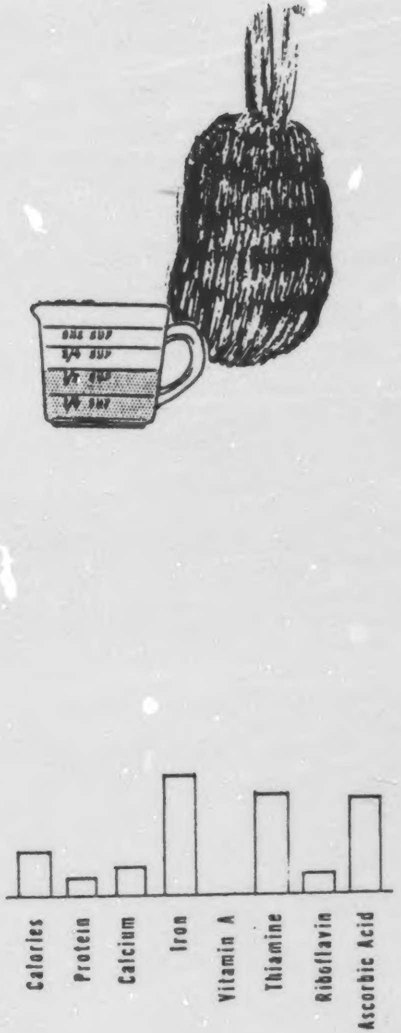
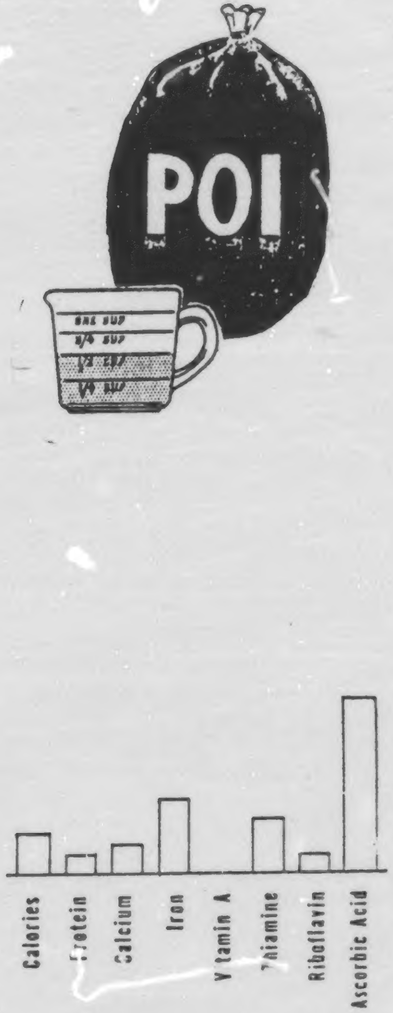
NUTRITIONAL VALUE OF HAWAIIAN PLANT FOODS

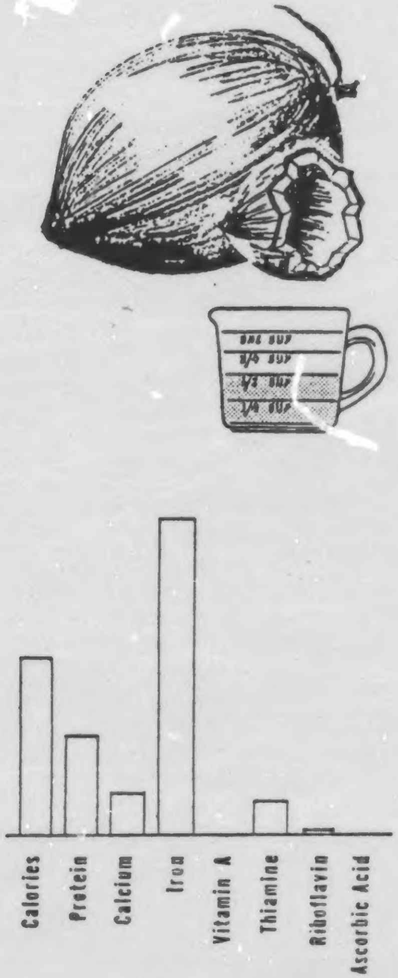
TARO/KALO
½ cup cooked



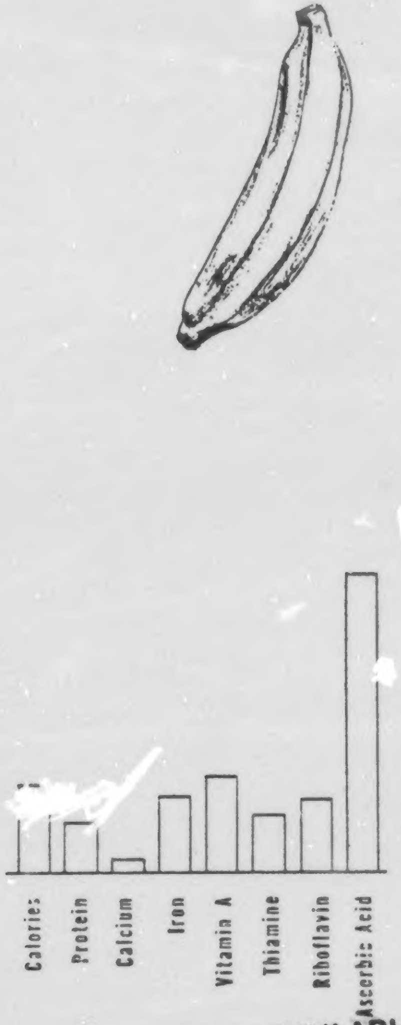
POI–Two finger
½ cup



COCONUT MILK/ WAI NIU
½ cup with water



BANANA–Bluefield/MAI'A
1 medium



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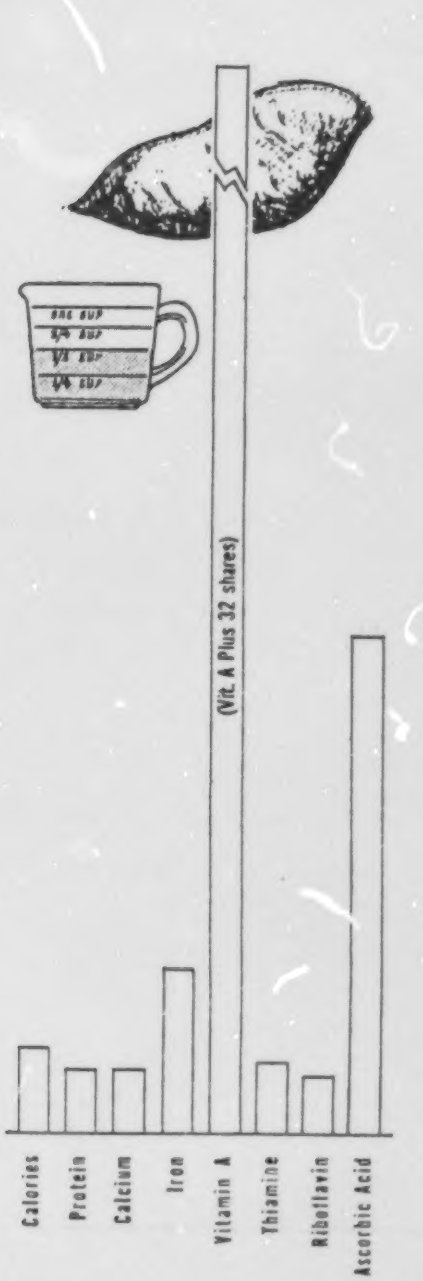
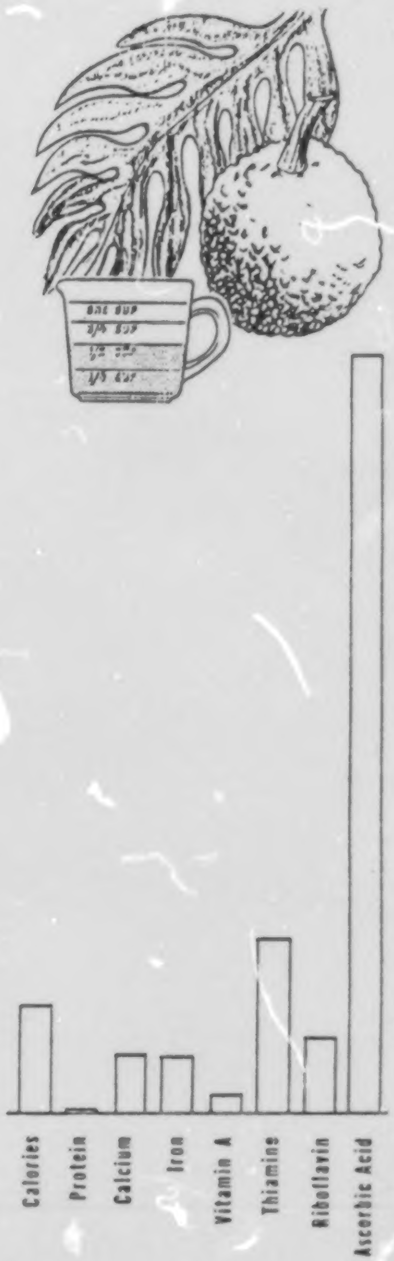
401

402

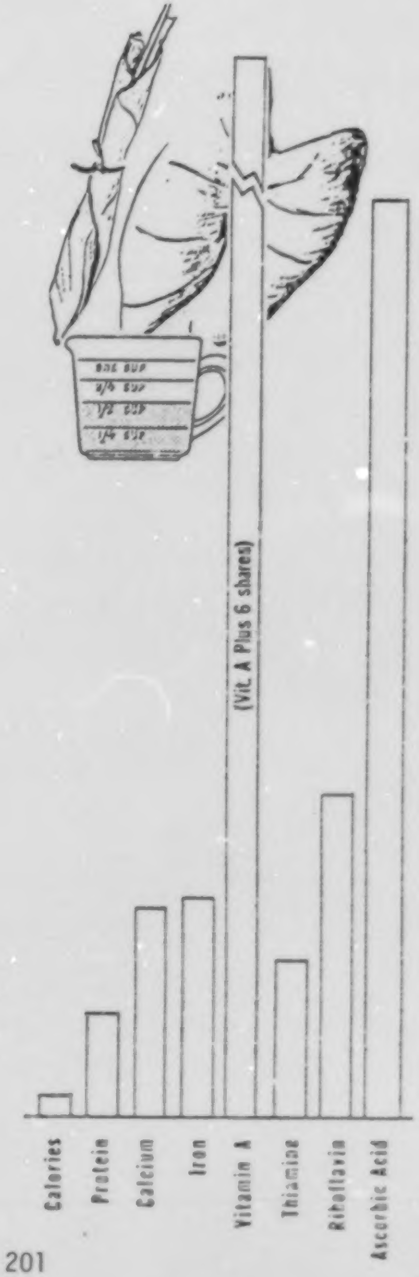
SWEET POTATO—Orange/'UALA
Colored ½ cup cooked



BREADFRUIT/'ULU
½ cup cooked, ripe



LŪAU (Taro Leaves)
½ cup cooked



For more information on foods eaten in Hawai'i, please refer to the Companion document for Nutrition Education Teachers' Guide (Draft), Department of Education.

This document contains detailed charts on 200 of the most commonly eaten foods in Hawai'i.

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"Huki I Ke Kalo"

* Huki i ke kalo

Huki, huki mai.

'Oki i ka huli

'Oki, 'oki mai.

Holoi i ke kalo

Holoi, holoi mai.

Pull the taro
Pull, pull

Cut the taro top
Cut, cut

Wash the taro
Wash, wash.

Ho'omo'a i ke kalo

Ho'omo'a mai.

Ihi i ka 'ili

Ihi, ihi mai.

* Ku'i i ke kalo

Ku'i, ku'i mai.

Cook the taro
Cook

Peel the skin
Peel, peel

Pound the taro
Pound, pound.

Ho'owali i ka wai

I ka pa'i'ai.

* 'Ai i ka poi

Mā'ona mai.

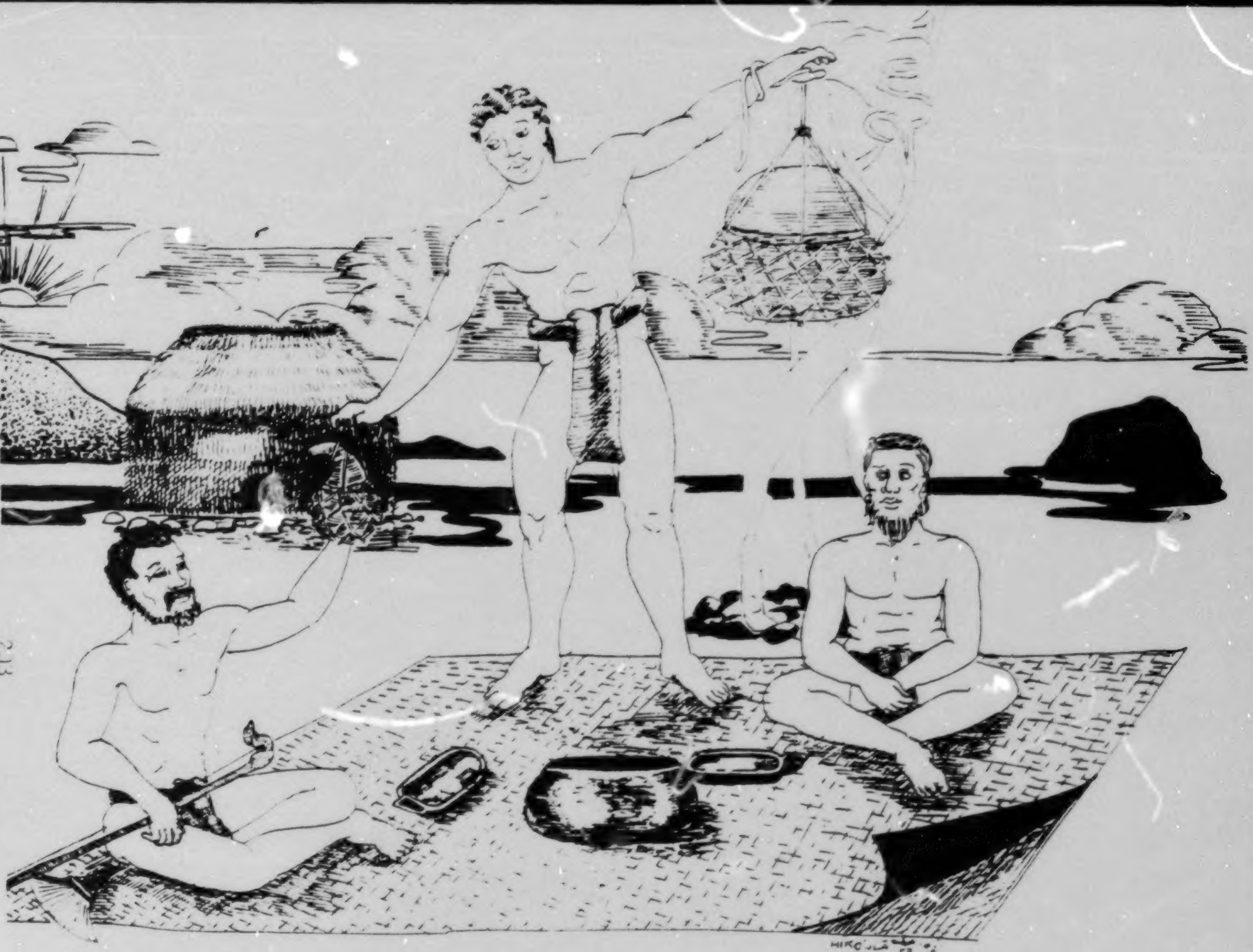
M-m-m-m-m- 'ono!

Stir in the water
In the freshly pounded *kalo*.

Eat the *poi*
(till) satisfied.

* Starred verses are part of the original chant contained in Kamehameha Schools, *Ho'omāka'ika'i/ Explorations 1981*. Reprinted with permission of the Kamehameha Schcols/ Bernice P. Bishop Estate.

Non-starred verses were composed by Hawaiian Studies state staff.



HOʻOKIPA

The following lessons were developed to accompany the lessons found in the 4th grade social studies guide, Early Hawaiian Life, pp. 148-166, Grade 4, Unit VII

CONTENT AREAS	EMPHASES
SOCIAL STUDIES	Methods of fishing Hand fishing Baskets and traps Spear Hook and line Pole Net Areas for fishing Freshwater Inshore Reef Deep sea Night Kapu and rituals Roles of women, men, children Kapu foods Conservation Exchange system Fishponds Construction and upkeep Kinds of fish raised
SCIENCE	The interesting habits of fish Eating habits Reproductive process Natural defenses

LEARNER OBJECTIVES

See: Early Hawaiian Life, pp. 154-155 for more objectives.

- Discusses the food exchange system, the necessity for cooperation and working together on individual projects such as fishing and the pulling together of the community in large numbers to provide labor for the chiefs and konohiki for large-scale projects. (kōkua, laulima, alu like, lōkahi)
- Describes, using the food exchange system within the ahupua'a as a case study, how 'ohana and community members were dependent upon one another in Hawaiian society during former times.
- Recognizes that the Hawaiian food exchange system was based on sharing and giving and receiving, instead of trade or barter, which stemmed from motives of practicality, sympathetic interest in general welfare of the scattered 'ohana and as a matter of self-respect.
- Explains using both ancient and modern Hawai'i as a case study, how economic resources are allocated and utilized to satisfy the people's basic needs and wants.
- Describes some ancient cooking methods which are still in use.
- Discusses some of the differences in cooking methods available to the Hawaiians of former times and to people in modern Hawai'i.
- Explains why the Hawaiians developed inshore fishponds.
- Contrasts the kinds of fishing women and children could do compared to men.
- Names some of the gear that a Hawaiian fisherman used for various types of fishing using Hawaiian words where possible.
- Discusses some of the beliefs and kapu connected with fishing.
- Explains some of the aspects of the kapu system as it related to eating and food.

- Identifies some species of fish known to the Hawaiians of former times either in real life or through pictures giving the Hawaiian name wherever possible.
- Identifies other foods besides fish which the Hawaiians of former times and of today could obtain from the ocean and inshore areas.

APPENDICES

Unit VII - E "Life In Ancient Hawai'i - Foods" - A Supplement, pp. 237-242.

J Fishing, pp. 253-254

The teacher should read Appendix J of this unit to get a general background needed to teach this unit.

Other Appendices are available in Early Hawaiian Life, pp. 202-248.

CONTENT AREAS	EMPHASES
SCIENCE (CONTINUED)	The anatomy of fish External characteristics Internal characteristics The ecosystem of a fishpond Interdependency of plant and animal life Organisms that live in ponds
LANGUAGE ARTS	Hawaiian language Learning to pronounce correctly the Hawaiian names of the seafood eaten by the early Hawaiians Writing daily journals on the life of a sea animal Writing reports on a sea product Listening to and discussing: Legends Stories Historical accounts about fishing Composing poems and creating stories about sea life Discussing conservation techniques Loko i'a (fishponds) Writing business letters Conservation of sea and pond life
412	413

LEARNER OBJECTIVES	APPENDICES
• Discusses some of the beliefs and kapu connected with fishing. • Explains why the Hawaiians developed inshore fishponds. (See Science in Hawai'i, A Fourth Grade ETV Guide, p. R1 for specific objectives of the ETV lesson on "Pond Communities in Hawai'i")	
• Imitates with correct pronunciation the Hawaiian words, expressions and phrases modeled by the teacher or kupuna. • Identifies some of the sea foods eaten by the Polynesians. • Listens to and answers questions orally and in writing about a legend or story about Hawai'i told in English but containing Hawaiian expressions and phrases appropriate to the child's level of language development in Hawaiian. • Describes the differences between the generalized education for living and specialized training that children in ancient Hawai'i received and the kinds of education a child in modern Hawai'i receives. • Identifies some methods used by the Hawaiians for finding answers to questions and for solving problems such as referring to legends or keen observation. • Writes prose or poetry in English, using Hawaiian words and expressions where appropriate, expressing the student's feelings about Hawai'i, Hawaiian food, music, dance, people and history. • Explains some of the aspects of the kapu system as it related to eating and food.	Unit VII - A Hawaiian Seafoods, p. 232 - B Sea Life Report, p. 233

CONTENT AREAS	EMPHASES
HEALTH	Importance of religion to the kānaka lawai'a (fishers) Observance of kapu Laws of early Hawai'i vs. those of today's fishers Preservation techniques of early Hawai'i vs. today's Salting, Drying vs. cooking, preservative chemicals, freezing Diets of fishers Today vs. early Hawai'i Compare nutritional value and cost
MUSIC	Songs of sea life Learning to sing Hawaiian songs with the accompaniment of the 'ukulele and/or autoharp Learning new vocabulary words and correct pronunciation through the singing of Hawaiian songs

LEARNER OBJECTIVES	APPENDICES
• Compares a day in the life of a Hawaiian farmer or fisher in former times with that of a modern farmer or fisher. • Describes the differences between the generalized education for living and specialized training that children in ancient Hawai'i received and the kinds of education a child in modern Hawai'i receives. • Contrasts factors in the local environment which presently affect health and safety with factors that existed in the environment in former times. • Names many of the foods eaten at a Hawaiian lū'au, or pā'ina and indicates why they were and are important nutritionally. • Contrasts the Hawaiians' notion of religion and spirituality with that of one's own ethnic group, with that of many members of modern religions, or with that of other ethnic groups that the student has studied. • Discusses ways in which it is evident that Hawaiians regarded nature and their place within nature somewhat differently from those who came to Hawai'i from some other cultures and tries to determine if some of these groups of people have been influenced by the Hawaiians' view. • Listens to and accepts opinions of others in group discussions. • Recognizes that within any ethnic or racial group an individual is unique, similar to but different in some way from all other fellow members of the group and from other people. • Recognizes that the Hawaiian culture and way of life is now a part of America's multi-ethnic society.	Unit VII - E "Life in Ancient Hawai'i - Foods- A Supplement," pp. 237-242
• Performs from memory simple Hawaiian songs. • Sings selected Hawaiian songs introduced by the teacher while playing rhythmic or harmonic instruments ('ukulele, guitar or auto harp) in time with the beat. • Accompanies a Hawaiian chant using a rhythmic instrument such as an ipu, pū'ili, kāla'au, kā'eke'eke, 'ili'ili or other implements.	Unit VII - C "Humuhumunukunukuapua'a". pp. 234-235

CONTENT AREAS	EMPHASES
MUSIC (CONTINUED)	Songs: "He 'Ono" "Ku'u Pūpū Kau Pōhaku" "'Ōpae E" "Humuhumunukunukuapua'a" "Ka Uluwehi O Ke Kai" "Nā 'Ono O Ka 'Āina"
ART	Artifacts for fishing Fashioning a fishhook out of bone Making hau rope 'Upena (net) making Drawing and painting sea life Building a miniature fishpond
GAMES AND RECREATION	Creative movement Creating hula movements for songs learned in music class Musical chairs Learning to listen for the names of fish in a fun game

LEARNER OBJECTIVES	APPENDICES
• Creates melodies and lyrics concerning a Hawaiian theme using English and Hawaiian words, expressions, and phrases. • Illustrates the tonal-rhythmic patterns of a Hawaiian song through singing and performing interpretive dance patterns and body movements. • Coordinates motions and movements of hands and feet while performing a traditional hula kahiko or hula 'auana. • Recognizes that selected words and expressions found in chants and songs that have been learned can be incorporated into the student's passive or active vocabulary.	
• Works with partners or groups on Hawaiian art and/or culture oriented activities such as an oral presentation, a bulletin board display, an Aloha Week/May Day pageant or Makahiki festival. • Practices behavior that illustrates respect for self, schoolmates, teachers and community resource people. • Performs roles in simulation activities illustrating individual rights and responsibilities in a group situation. • Describes the way of life of the early Hawaiians as a result of adaptation to the environment. • Relates how the Hawaiians adapted foreign materials and technology to their needs when these things became available.	Unit VII - D Fashioning a Fishhook, p. 236 - I Making Hau Cordage, p. 252
• Teaches younger children the rules for simple Hawaiian games and activities. • Performs more advanced or complicated body movement patterns in games and dances.	Unit VII - F "Kanaka Lawai'a," pp. 243-247 - G "Go to the Head of the Fish," p. 248

CONTENT AREAS	EMPHASES
GAMES AND RECREATION (CONTINUED)	Fishing games "Go to the Head of the Fish" - Children are given a fun way to learn the various methods of fishing. "Kanaka Lawai'a" - Children are given a chance to recognize the variety of Hawaiian sea life using their Hawaiian equivalents.

LEARNER OBJECTIVES

- Participates in Hawaiian games and sports.
- Relates the use of Hawaiian games, sports, and quieter pastimes in former times to improving coordination and agility, physical strength, logical thinking and memory.
- Coordinates motions and movements of hands and feet while performing a traditional hula kahiko or hula 'auana.
- Identifies some species of fish known to the Hawaiians of former times either in real life or through pictures giving the Hawaiian name wherever possible.
- Identifies other foods besides fish which the Hawaiian of former times and of today obtains from the ocean and inshore areas.

APPENDICES

Unit VII - H Answer Sheets for "Go to the Head of the Fish" and "Kanaka Lawai'a"/Fishes and Fishing Methods, pp. 249-251.

The following lessons were developed to accompany the lessons found in the 4th grade social studies guide, Early Hawaiian Life, pp. 148-166,

Grade 4, Unit VII

SCIENCE

- Science activities to study the habits of fish/sea life.

  1. Call your science resource teacher and request a salt water aquarium for the classroom. Have available a variety of fish/sea life for the aquarium. Have the children observe for answers to their questions as they participate in the following activities.
  2. Inquiry
     a. Talk about the importance of sea life to the Hawaiians and what they needed to know about the sea creatures' habits in order to be successful on their fishing trips.
     b. Encourage them to ask questions such as
        1) What does aku feed on?
        2) When does the 'ama'ama (mullet) lay its eggs?
        3) How do fish reproduce?
        4) In which depth of the ocean can we find kūmu (goat fish)?
        5) How does food pass through the fish's system?

Based on the questions the children ask, science activities can be conducted to find answers to their questions. Activities may include some of the following

LANGUAGE ARTS

- Language activities dealing with the sea life of early Hawai'i.

  1. Learn the pronunciation of the variety of fish and sea life eaten by the early Hawaiians. See Appendix Unit VII-A, p. 232.
  2. Daily journal
     a. Have the children keep a ten-day journal of their observations of a sea creature in the salt water aquarium.
     b. Discuss with them things to look for.
     c. Encourage them to experiment with their sea creature. For example:
        1) What happens when you tap the side of the aquarium?
        2) What happens when you cover the entire tank with a cover to darken the aquarium?
  3. Fish/sea life report
     a. On a large wall chart write the names of all the fish/sea life the children can think of as being part of the Hawaiians' diet. Use the Hawaiian as well as the English names.

HEALTH

- Inquiry activities dealing with the feelings of the Hawaiians, especially the fishers, who lived under a very strict religious system.

  1. Have the children talk about
     a. "What is religion, spirituality?" Encourage them to share their religious activities and what it means to them.
     b. What do we mean by the term god ?
     c. How does this being or spirit affect our lives? Does this spirit play an important part in our lives?
  2. Compare the children's religious observances with that of the early Hawaiians.
     a. Read: Handy. Ancient Hawaiian Civilization, pp. 106-108 to the children.
     b. Divide the children into three-four groups and have them discuss their feelings about the following questions. Remind them about listening to and accepting the opinions of others.
        1) How did the kapu (rules) help the kanaka lawai'a (fisherperson) be more successful?

MUSIC

- Songs about fish and other sea life.

  Discuss how composers of today take topics from the environment and compose lyrics.

  1. "He 'Ono" (Delicious) by Bina Mossman

     This song describes the delectable fish of the sea. See Elbert and Māhoe. Nā Mele o Hawai'i Nei, p. 48.

     a. Write the words on a chart.

     b. Have the children point out all the names of familiar fish in the song as you underline them with a colored pen.

     c. Talk about other familiar Hawaiian words in the song. Ask a kupuna or music resource teacher to assist in teaching the song.

     e. Teach the song, one line at a time. The tune is catchy but the words require skill in pronunciation due to the many glottal marks. The children will learn it quickly, however, because it is such a fun song.

ART

- Art activities involving the fashioning of artifacts used for fishing. See: Early Hawaiian Life, p. 1[illegible]3.

  1. Fashion a fishhook out of bone, wood or clay.

     a. Review some of the fishing methods used by early Hawaiians, then motivate the students to fashion a makau (fishhook) out of iwi (bone) - makau iwi.

     b. Show them pictures of a variety of hooks using the following references:

        1) Buck. Arts and Crafts of Hawai'i, pp. 324-333

        2) Emory. Fishhooks

        3) Feher. Pictorial History of Hawai'i

     c. Try to take them to the Bishop Museum or any other similar place to study the designs of hooks.

GAMES AND RECREATION

- Creative movement for songs about sea life.

  1. Have the children create their own motions for Hawaiian songs about the ocean that are written in English.

     a. "Hukilau"
        See Alfred Apaka's Greatest Hits, Capitol Records, for song.

        1) Write the words on a big chart. The children have probably learned this song in an earlier grade. If not, it can be taught in music class.

        2) Encourage the children to create the hula motions for this song.

        3) When they have mastered the hand motions, review the leg/foot movements in hula as shown in Appendix Unit I-K, pp. 40-41.

SCIENCE

suggestions:

1. Visit the Aquarium or Sea Life Park to study the different kinds of sea life. Coordinate your objectives with theirs. See: Appendix Unit VII-H, pp. 249-251.

2. Learn the Hawaiian names of the various sea animals studied.

3. Call in a resource speaker, like a professional aku fisher, to talk to the children about aku, their habits, where they live, how to catch them, how to keep them fresh, what they feed on, how valuable they are today, etc.

4. Study the life of a salmon to see the life cycle of a fish.

   a. #1540 "King of the River", 11 min. 16 mm. Film Catalog/1978 OIS, Multimedia Branch Services.

   b. Other films:

      #0279 "Biography of a Fish", 10 min. Shows the life cycle of the stickleback fish.

      #0930 "Fish are Interesting". Points out the differences in structure, defenses, food, and other habits.

LANGUAGE ARTS

See: Titcomb. Native Use of Fish in Hawai'i.

b. In a second column write the name of the student who volunteers to do the research on that particular sea animal/plant

c. Discuss the format of the report and contents. See: Appendix Unit VII-B, p. 233 for a suggested format.

d. Encourage the children to use several references.

e. Have the children share the reports with the class, then compile them into a booklet for others to enjoy. Encourage them to compose simple poems also.

4. Read Handy. Ancient Hawaiian Civilization, pp. 105-111, "Aku and Ahi Fishing." When completed, have the children recall:

   a. Steps in preparation

   b. Religious ceremonies - kapu

   c. Hawaiian terms:

'aumakua	(family guardian)
ho'okele	(steersperson)
kanaka lawai'a	(fisherperson)
ko'a	(fishing ground)
kū'ula	(fishing god)

HEALTH

2) If you were a fisher in early Hawai'i and you believed in the help of the gods, how would you feel after praying for help?

3) If a wife did not keep the kapu while her fisherman husband was out fishing, how would you feel about the kapu if he came home loaded with fish anyway?

4) What do you do today to get the kind of spiritual strength the Hawaiians received after praying to the gods?

c. Have the children compare the early Hawaiian beliefs with those of their own religion.

d. Have the children interview their parents about their religious beliefs. This may lead to a study of the various religions.

e. Have them think about the impact of the unseen spiritual god and how he/she affects the lives of people all over the world.

f. Ask:

   1) How can this spiritual force help you today?

MUSIC

2. "Ku'u Lei Pūpū" by Mary K. Pūku'i

See: Māhoe E Hīmeni Hawai'i Kākou, pp. 84-85.
Elbert and Māhoe. Nā Mele O Hawai'i Nei, p. 72.

This song describes the beauty of the lei pūpū o Ni'ihau (shell lei of Ni'ihau). It was written for a Lei Day Pageant in 1952 and has become a great favorite with the people of Ni'ihau in celebrating the beauty of the tiny seashells. The English translations are given with the above-listed references.

a. Take a shell lei to class to school to show the children what this type of lei looks like. There are many kinds besides those from Ni'ihau.

b. Have the children listen as you read the five verses of the song in English. Then introduce the five verses in Hawaiian using a chart.

c. If you are not familiar with the tune, ask the kupuna or music resource teacher for kōkua.

d. Underline the Hawaiian words familiar to the children and point out new words to build up their vocabulary:

ART

d. Show them slides of hooks or a film from the DOE 16mm Film Catalog, #3685, "Hawaiian Fish-hooks," 11 minutes.

e. Encourage them to bring in soup bones from home (as used in making soup or stew) or go to the supermarket and ask the butcher for some.

f. Clean and dry the bones and cut into 1/4" - 3/8" widths.

g. Give each child one section and have him/her draw the shape of his/her hook on the section. See: Appendix Unit VII-D, p. 236 for diagrams and procedures.

h. If this activity seems too difficult for some of your students, have them fashion their hooks out of white clay. Fire their hooks in a kiln.

2. Kaula hau - Hau bark rope

The children should experience the making of

GAMES AND RECREATION

4) Have them include the foot work in hula. E.g.,
   a) kāholo
   b) hela
   c) 'uehe/'uwehe
   d) 'ami

5) Do the complete hula for another class after a few practice sessions.

b. "Ku'u Lei Pūpū" (See: music activity #2 on this page.) Practice the hula motions created in music.

c. "'Ōpae E'

Using the translation shown in Appendix Unit I-F, p. 34, create hula motions for all of the verses.

Encourage the children to choreograph the dance. Do this creative movement as a hula noho (sitting dance).

Science

5. ETV viewing - Science in Hawai'i: "From A Single Cell ... A Story of Development"

   This program shows how living things reproduce, differentiate and grow because of heredity and environment. It shows the union of sperm and egg of the Medaka fish. Pre- and post-viewing activities are included in the guide, Science in Hawai'i, A Fourth Grade ETV Guide.

Another interesting aspect of fish life and its adaptation to its environment is its natural defense system.

1. Talk to the children about how various sea animals protect themselves. Have them share their personal experiences.

   E.g. Portuguese-man-of-war (Jelly-fish) has tentacles in which single cell nematacysts sting. Wana (sea urchin) releases sharp spikes when attached or stepped on.

2. Observe some of the sea life in the salt water aquarium and look for natural defenses.

3. ETV viewing - Science in Hawai'i "War and Peace on the Coral Reef" Viewers can observe the damselfish who defends it territory from invaders. Pre- and post-viewing activities are included in the guide: Science in Hawai'i.

Language Arts

d. Season for catching aku/ahi

e. Ceremony for a new fisher. How children learn to be fishers.

f. How the Hawaiians practiced conservation.

g. At the end of the recall discussion, encourage the children to write a brief description of "A Hawaiian Fisherperson."

   1) Encourage them to include cultural factors that led to the development of different types of fishhooks for different purposes.

   2) Have them also include how they would have felt being an apprentice to a famous fisherperson.

5. Reading and discussing stories and legends about fish.

   a. Guy and Pam Buffet. Adventures of Kamapua'a. This story is about the demigod Kamapua'a who was capable of changing himself into many forms, one of them being the humuhumunukunuku-apua'a.

      1) Read the story to the children and have them listen for the various forms of Kamapua'a. Refer also to Appendix Unit I-D pp. 29-30 for the various forms.

Health

2) How did the early Hawaiian belief in and respect for nature affect the people who came to Hawai'i later?

3) Do other cultures today observe some of the kapu of early Hawai'i? Why?

3. Have the children name some ethnic religious observances in Hawai'i today.

   E.g. a. Chinese lion dances

   b. Buddhist offering of food on grave sites

   c. Hindu burning of incense and wearing of a painted dot on the forehead

   d. Japanese Bon dance

   The children should be able to verbalize the generalization that the Hawaiian culture and way of life is now a part of a multi-ethnic society.

4. Culmination:

   Invite an older person brought up in a Hawaiian lifestyle to share with the children his or her mana'o (thoughts) about Hawaiian fishing kapu and spiritual observances as practiced in his/her youth.

MUSIC

E.g.

mahalo	(admire)
no'eau	(skill)
'ohi au a kui	(I gathered and strung)
lei kāhiko	(decorative lei)

A kupuna could be asked to kōkua with this lesson.

e. Teach the song.

f. After the children have learned the song, encourage them to create hula motions for each verse.

g. Teach the 'ukulele chords as shown on the music score - G and D7.

3. "'Ōpae E"

See: Appendix Unit I-F, p. 34. Use similar procedures to teach the song as outlined in #2 above.

Records: This Is Eddie Kamae, LP, Eddie Kamae and the Sons of Hawai'i; Mokulana, LP, Leon and Malia. Mokulana features a story related to the song which the children would enjoy.

ART

rope out of hau or olonā. Since hau is so plentiful across the islands, have the children experiment with hau.

a. For making hau rope - DOE/OIS. Resource Units in Hawaiian Arts and Crafts (available in all school libraries) or see Appendix Unit VII-I, p. 252.

b. Use the stripped hau branches for making carrying sticks, fashioning canoes, paddles or other Hawaiian artifacts or for making floats for a 'upena kō lau or hukilau, seine nets for catching fish near the shore.

3. 'Upena kō lau

Call in resource persons to talk about, demonstrate and teach the children net making. They may work in small groups so that several children work with one resource person (kupuna if possible) on one

ART

net. This is an excellent opportunity to work with 'ohana concepts of aloha, laulima, alu like, lōkahi, kōkua. This activity may require several sessions but while some are making the nets, others may work on the hau floats and hau cordage. Plan the activities with your resource persons.

Talk about how the Hawaiians started using different kinds of introduced cordage to make their nets after the influx of newcomers.

4. Silkscreening

a. Have the children create a design for the silkscreening process.

b. Set these designs on notecards, T-shirts and fabric yardage.

c. Designs can be of any of the reef animals, especially seashells.

ART

5. Using Hawaiian Dyes

a. Experiment with dyes from Hawaiian plants and animals.

1) Sea Urchin - blue

2) 'Ōlena root - yellow

3) Noni root - yellow

4) Kukui husk - black

See Lucas. Plants of Old Hawai'i

b. Have the children do tie-dying. They can make a kerchief using muslin.

c. Evaluate the activity and have the children verbalize generalizations about the early Hawaiians.

E.g. The Hawaiians were innovative and very much aware of their environment.

SCIENCE

- Studying the anatomy of fish

1. Cut open a variety of fishes

    a. Plan ahead of time for this activity so the children's parents can be involved in supplying the classroom with a variety of fish (fresh ones!).

    b. Invite a few parents to come in as helpers. Have the children plan the kinds of information they want to obtain.

        1) Locate the vital organs.

        2) Draw and label the external and internal parts.

        3) Trace the digestive and excretory systems.

    See the district science resource teacher for dissecting tools.

2. Evaluate what the children have learned by having them research their findings and present them to the class.

LANGUAGE ARTS

2) Encourage the children to plan a bulletin board display of the various forms. The art work can be done in art class. See art plans on the facing page.

b. Pūku'i. Tales of the Menehune, pp. 51-54, "Why the Mullet Swim Around O'ahu."

1) Talk about mullet to see if the children know which fish you're reading about. Have available a picture of the 'ama'ama (mullet).

2) Have the children share information they have about the 'ama'ama.

3) Read the story to the children.

4) Discuss:

What kind of mana did the father have that empowered him to cause the 'ama'ama to swim to Lā'ie?

5) What do you suppose he did to get the 'ama'ama to do what he asked? (Try to elicit inferences based on previous readings about the religious rites of the Hawaiians E.g.: Feeding the 'aumakua.)

HEALTH

- Preservation techniques of the early Hawaiians.

1. Discussion. Ask the students:

    a. How do we keep food from spoiling today?

    b. How do you suppose the early Hawaiians preserved their food? (Write the children's predictions on a chart.)

    c. What causes food to spoil?

        1) Experiment by taking a potato; cut it up into several sections. Have a child

            a) Rub his/her dirty hands on one section (label it).

            b) Breathe on another (label).

            c) Sneeze on another (label).

MUSIC

- Teach "Humuhumunukunuku A Pua'a" by Irmgard Aluli and Edna Bekeart

See: Appendix Unit VII-C, pp. 234-235 for words and music. Record-on *Hawaiian Time*, LP.

  a. Refer to language arts lesson #5, p. 218 for information about this fish in its Kamapua'a form

  b. Show the children the picture of the fish and ask how many of them have seen one.

  c. Talk about the name:

humuhumu	- is the name of the fish
nukunuku	- snout
a pua'a	- like a pig

Ask: Does the fish look like a pig?

  d. Teach the song using the *'ukulele*. The tune is catchy and should be sung with lots of spirit.

ART

- Art activity for language arts lesson #5, p. 218 deal-with Kamapua'a.

  1. Have the children recall the various forms of Kamapua'a.
  2. List them on a chart.
  3. Have the children volunteer to illustrate the various forms.
  4. Have them meet in their respective groups to plan how they want to do the art work. Have them decide on the media to use such as crayon, pentels, marsh or felt pens or paint.
  5. Plan with them the composition of the bulletin board and have them decide on the size of each form.
  6. Have them decide on an eye catching title for the

GAMES AND RECREATION

- Creative games for learning the names of fishes and fishing methods.

  1. Musical chairs game

     a. Set up enough chairs to accommodate the number of children in the class, less one.

     E.g. 25 students:
     24 chairs

     b. Name every third person the same fish such as *'ama'ama*.

     c. Name every second person another fish such as *kumu*.

     d. Name every first person *weke*. Going around the circle the players will be *weke*, *kumu*, *'ama'ama*, *weke*, *kumu*, *'ama'ama*, etc.

SCIENCE

3. #3144 "What is a Fish?", 16 mm Film Catalog/1979, 22 min.

   Bibliography - See: Early Hawaiian Life, p. 166.

LANGUAGE ARTS

Culminating activity

Have the children think about a particular fish they like especially and have them think about a particularly interesting habit of that fish. Encourage them to compose stories about them or to write poems. These may be illustrated and compiled into a booklet.

HEALTH

   2) Place all three sections in separate plastic bags for several days and have the children observe the results.

   3) Talk about germs and how they thrive under certain conditions.

2. Having learned about germs, have the children study and experiment with the preservation of sea food.

   a. Salting

   b. Drying

   See: Appendix Unit VII-E, pp. 237-242.

MUSIC

2. "Ka Uluwehi O Ke Kai"
(The Plants of the Sea)

Limu (seaweed) played a very important role in the diet of the Hawaiians. It was their source of iodine and other minerals and the "perfect garnish" for their food. This song describes four kinds of limu: pāhe'e 'ele'ele, līpoa and kohu.

Source: Hi'ipoi I Ka 'Āina Aloha, Edith Kanaka'ole LP, Hula Records

a. The words are written in the centerfold of the album. Write the words on a song chart.

b. Have the children point out familiar words such as kai (sea), moana (ocean), nui (big), i luna (on top), etc.

c. Go over the words, listening for correct pronunciation.

d. Have them listen to the record, especially for greeting and happiness expressed by a kupuna, Aunty Edith.

ART

bulletin board. Have the title translated into Hawaiian by the kupuna in your school or any other knowledgeable Hawaiian speaker. Remind them about the 'ohana concepts that illustrate respect for the self and others.

GAMES AND RECREATION

e. One player called "manō" (shark) will stand in the center of the circle and call out the name of one of the three fishes such as "weke."

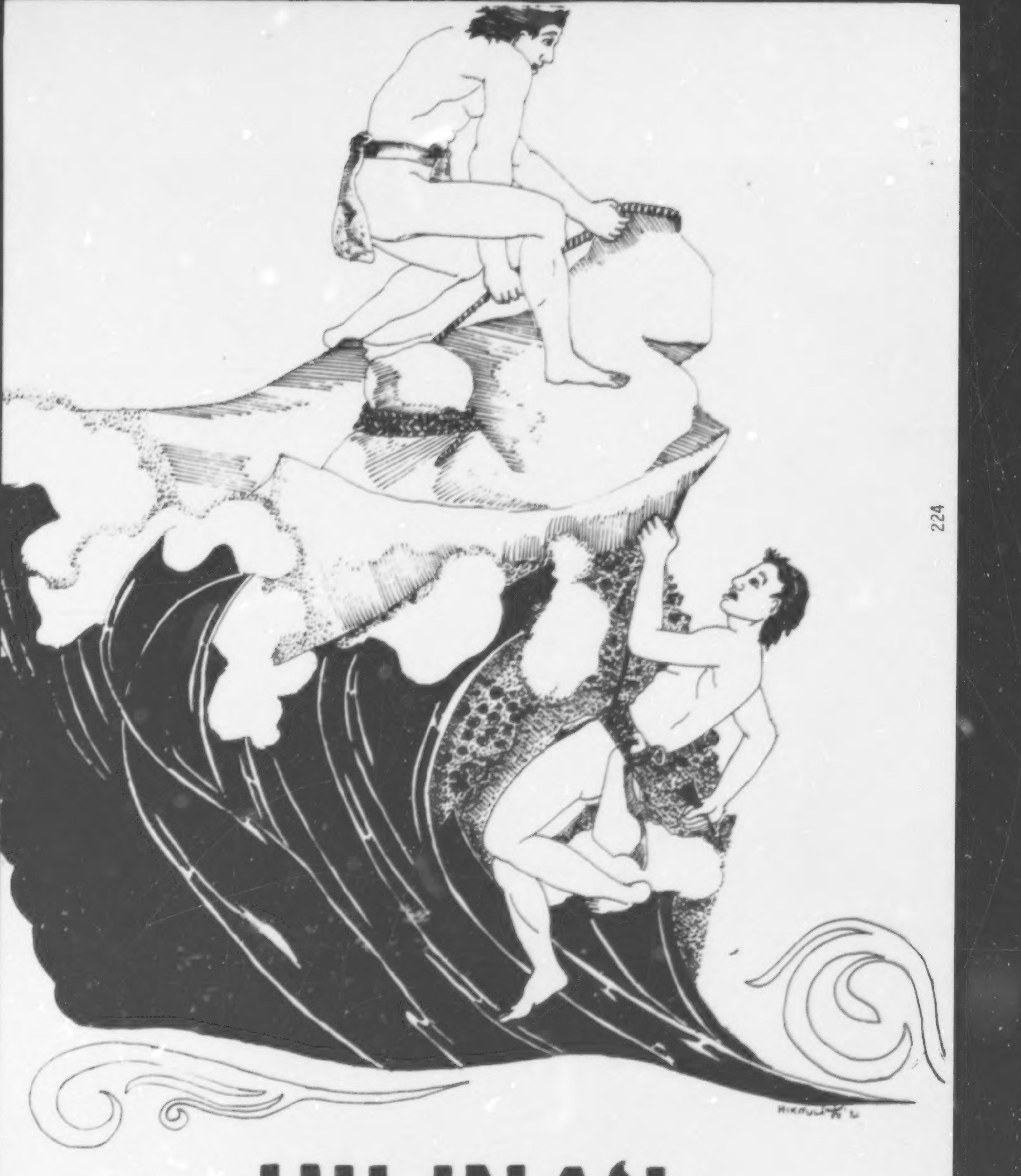
f. All the weke have to stand up and change to another seat.

g. If the manō gets to a chair before one of the weke, that weke becomes the manō and calls out another name of a fish.

h. If a manō wants everyone to stand up and change seats, all he has to do is shout "Manō" and everyone has to change at least two chairs away from where he/she is seated.

2. "Go to the Head of the Fish"

See Appendices Unit VII-F and G, pp. 243-248 for game materials and game diagrams. Appendix F will be used for two games, "Go to the Head of the Fish" and "Kanaka Lawai-'a."



HILINAʻI

MUSIC

"Nā 'Ono O Ka 'Āina"
(Delicacies of the Land")

Source: Elbert and Māhoe. Nā Mele O Hawai'i Nei, p. 82

This song describes the deliciousness of fish, especially the mā'i'i'i, kole, 'ōpelu and akule, māikoiko, wana (sea urchins) and loli (sea cucumbers).

This song may be a little more difficult due to the language but a kupuna would be very helpful in teaching the vocabulary of this song.

ART

GAMES AND RECREATION

Teacher preparation:

Run off copies of Appendix Unit VII-F, pp. 243-247. Glue each sheet to a sheet of oaktag. Cut each rectangle and laminate the cards.

Game procedure:

1) The object of this game is to familiarize the children with the fishing methods of early Hawai'i. Given a picture of the seafood found in Appendix Unit VII-F, pp. 243-247 the player has to correctly identify the fishing method used to catch or get that particular sea food.

2) If he/she gives the correct answer as recorded in Appendix Unit VII-H, pp. 249-251 he/she may throw the dice and advance towards the head of the fish.

3) If the player does not give the correct answer, he/she loses a turn.

4) There are obstacles on the track, but the winner who

SCIENCE

- The following activities involve the studying of the ecosystem of the pond community

  1. Conduct the following lesson in conjunction with Early Hawaiian Life, pp. 161-163.

     a. Refer to Science in Hawai'i, A Fourth Grade ETV Guide, Unit 18 "Pond Communities in Hawai'i," pp. R1-R6. See ETV schedule.

     b. If unable to view the program at the scheduled time, order it for classroom showing on the Videotape Program Request, Television for Learning guide (ETV Section).

LANGUAGE ARTS

- The following language activities involve the studying of the conservation techniques of the Hawaiians in dealing with their loko i'a (fish ponds)

  1. Discussion - Ask the children

     a. What can people today do to prevent the pollution of ponds?

     b. How did the Hawaiian pond keepers prevent the polluting of ponds? (Kapu)

     c. What are some of these kapu? List on a chart.

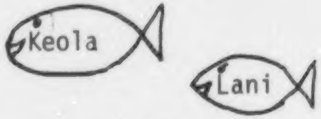
  2. Have the children pretend that they are the ali'i of an ahupua'a. Have them write a list of ten kapu they would

HEALTH

- The health activities below involve the children in studying the diet of a fisher today and comparing it with that of an early Hawaiian fisher.

  1. Have the children predict the typical diet of a fisher today. Set up a chart to show the diets of a modern and an early Hawaiian fisher.

	Modern	Early
Breakfast		
Lunch		
Dinner		

Music	Art	Games and Recreation	
		gets to the fish's mouth first becomes the Po'o Lawai'a of the class (head fisher) 5) When a player is declared Po'o Lawai'a, his/her name may be placed on fish cards and placed on a bulletin board entitled "Po'o Lawai'a" Eg.  etc.	
	• Loko i'a (fish pond) oriented group art activities. These activities are designed to increase the children's awareness of how the Hawaiians made good use of their natural environment. These activities encourage the practice of the 'ohana concepts and allow the children to be creative.	• Loko i'a (fish pond) oriented recreational activities. These activities help the children to recognize the variety of food available from the sea. Have the children create "Fish" games similar to the one described below. See: Appendix Unit VII-F, pp. 243-247 for game materials. 1. "Kanaka Lawai'a" game a. Run off four copies of each page of fish pictures of Appendix Unit VII-F, pp. 243-247.	

Science

c. This lesson involves the viewer in the study of the interdependency of plant and animal life in loko (pond) communities. It stresses the need for these loko (ponds) to be protected and conserved.

d. ETV viewing - Science in Hawai'i, "Hawai'i's Future"

This program discusses Hawai'i's potential self sufficiency. It takes a look at aquaculture and mining at sea. Video tapes are available at the ETV office-Mānoa School.

e. Find out about modern day fish farming called aquaculture. Consider going on a field trip to an aquaculture farm.

2. Study loko i'a (fish pond) water under the microscope.

   a. Have the children collect samples of loko i'a water. If possible study the contents of loko i'a water right at a loko i'a to see the variety of organisms that live in loko i'a water.

   b. Have the children identify the organisms, using books and resource persons.

Language Arts

declare in order to conserve the life in the loko i'a (fish ponds).

3. Read: Handy. Native Planters in Old Hawai'i, pp. 260-262, to help the children understand

   a. How a fish pond works.

   b. How they were built and guarded.

   c. What types of seafood were raised in fish ponds.

4. Culminating activity:

Practice writing business letters

Have the children write business letters to the Governor or to the legislators of their districts requesting state assistance in keeping pollutants out of the air and streams. Include in the letter reasons why and possible solutions on how to solve the problems.

Health

2. Analyze these foods eaten and tie them in to the health problems each group faced.

   a. Do the Hawaiians today consume more salt than the early Hawaiians did?

   b. What are the dangers of eating too much salt? sugar? fats?

3. Look at nutritional value charts and compare the level of nutrition of both groups.

4. Classify the diet food of each group into the basic food groups and ask:

   a. Which group ate more protein?

   b. Which group consumed more fats and cholesterol?

   c. How do these foods affect the health of these people?

5. Have the children research why fish and other seafoods are better for an individual rather than beef and pork.

6. Culminating activity:

   a. Have the children write a healthy menu for an individual using the foods that the Hawaiians ate. Include the food of the people today, taking into account those

MUSIC

ART

1. Building a loko i'a. (See activity in Early Hawaiian Life, p. 161.
    a. Have the children plan a blueprint of their favorite fish pond. (This activity should be conducted after the children have had a chance to visit a fish pond or several fish ponds.)
    b. Encourage them to use creativity in planning the layout, materials needed to build it, size. The dimensions should be drawn to scale with the actual size of the pond they've chosen, if this information is available.
    c. Each participant should be made to feel important. Be sure roles are clearly defined.
    d. Using all the research materials they've acquired in social studies and science, have them construct a

GAMES AND RECREATION

b. Cut out the pictures of the seafoods and glue them to oaktag cut to the same size. Laminate these cards.

c. Deal out the cards so each player has five cards. Place the rest of the cards face down in the middle of the table.

d. Play the game just as you would "Fish" with a regular deck of cards.

e. Each player must attempt to accumulate as many sets of four as possible by asking his/her opponent for the desired card using the Hawaiian name for the seafood desired as his/her turn comes up. If the opponent does not have the card, he/she says "'A'ohe I'a."- no fish. 'A'ohe means "no more" so if the opponent asks for "limu 'ele'ele" and the person does not have the card, the answer should then be "'a'ohe limu 'ele'ele.

SCIENCE	LANGUAGE ARTS	HEALTH
c. Discuss the importance of these organisms to the well being of the loko i'a. d. Experiment with loko i'a water by adding pollutants to the water. Have the children observe what happens to the organisms. e. ETV viewing - Science in Hawai'i, "The Science and Technology of Crop Production." This program discusses the use of water (in early Hawai'i) for crop production and the science and technology involved in uses of the land as well as the water. Culminating activity: Study: Sterling. Sites of O'ahu; and read about some of the loko i'a (fish ponds) located all over the island. Find out who owns them and what's being done about them. Find out which ones have disappeared and why. Another important resource to use in studying loko i'a is Summers. Hawaiian Fishponds.		foods that provide the highest nutritional value. b. Ask: Do all people like Hawaiian food? Why or why not?

MUSIC	ART	GAMES AND RECREATION	
	miniature fish pond on cardboard or some other sturdy platform. Check for accuracy in placing the *mākahā* (gate). Have them paint the variety of fish and *limu* and place mini-rocks with *limu* in the pond. Encourage creativity. e. Display the finished products in the library for other children to see. Have each group do a write-up on the pond.	f. The player then picks up a card from the center deck. g. The game continues until all the cards have been picked up from the center pile. h. The winner is the player with the most packs of four. This game is to familiarize the children with the Hawaiian names of the seafoods and to recognize the various foods from the sea especially the *limu* and *i'a* (fish).	

HAWAIIAN SEAFOODS

FISHES

āholehole	young āhole, "sea pig"
'ama'ama	mullet
aku	ocean bonito
akule	goggle eyed scad
a'u	sword fish
āweoweo	red fish, big eye
awa	milk fish
enenue, nenue	rudder or pilot fish
kala	surgeon fish
kole	surgeon fish
hīnālea	brightly colored wrasses
*hīhīmanu	sting ray
*hāhālua	manta ray, sea devil
halalū	young akule
humuhumunukunukuapua'a	trigger fish
kawakawa	bonito
*koholā	whale
kūmū	goat fish
mānini	surgeon fish
mālolo	flying fish
moi	thread fish
*niuhi	grey shark
*nai'a, nu'ao	porpoise
'ōpelu	mackerel
'o'opu	goby
'ōhua	young fish
'ō'io	ladyfish, bonefish
ono	mackerel type fish, "wahoo"
'ōpakapaka	blue snapper
palani	surgeon fish
*palaoa	sperm whale
*pualu	surgeon fish
ulua	crevally
weke	goat fish

SHELLFISH

hāwa'e	sea urchin
hā'uke'uke	sea urchin
'ina	young wana
leho	cowrie
'opihi	limpet
'ōpae	shrimp
pū	conch
pipipi	small mollusks
pāpa'i	crab
ula	lobster
wana	sea urchin

OTHER

he'e	octopus, commonly called "squid"
limu	seaweed
pa'akai	salt

* foods kapu to women

Sealife Report

by

____

The name of my sealife is the ______________________________
Scientific/English Name

____
Hawaiian Name

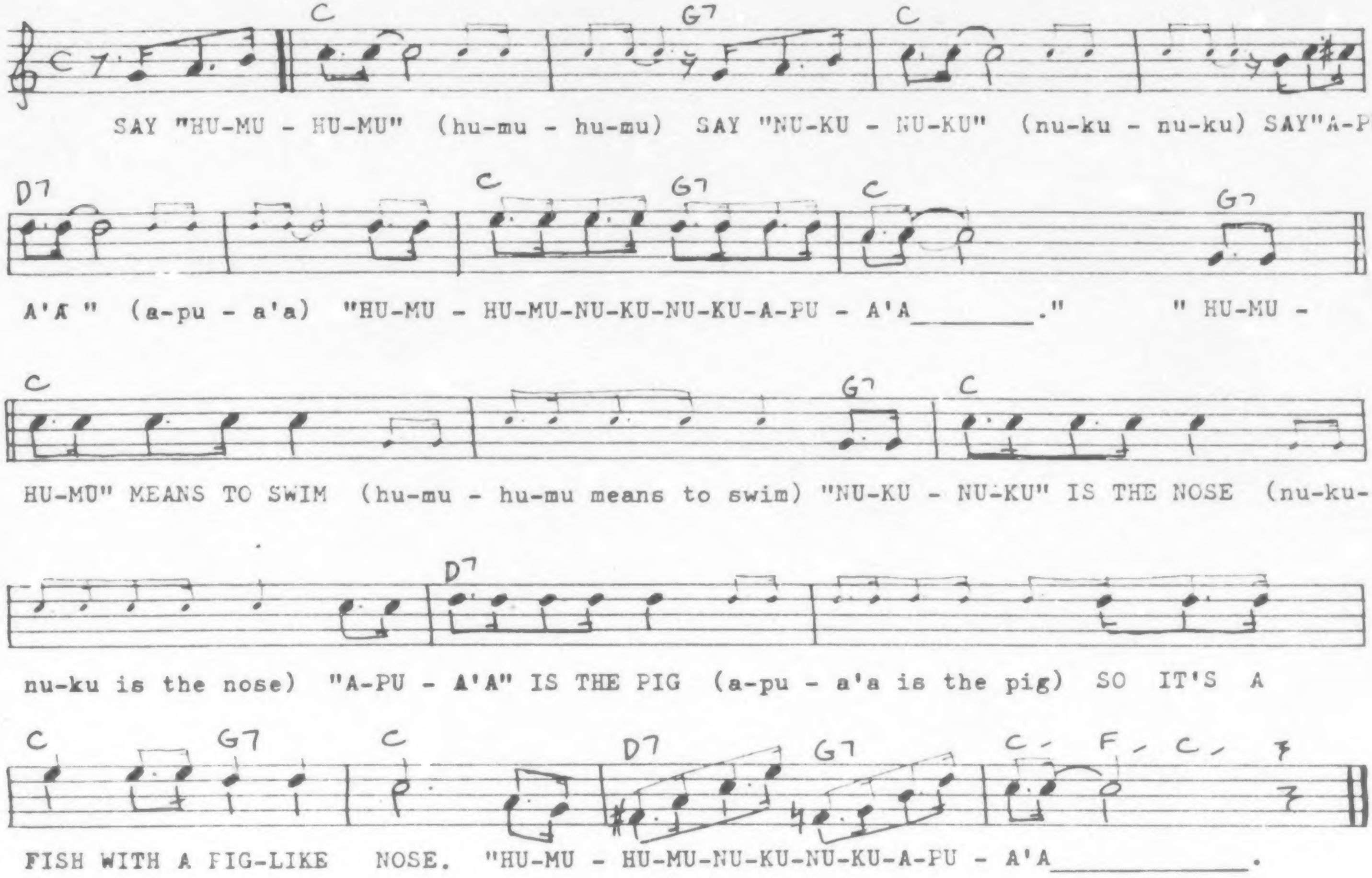
Description:

Where found:

Value:

This is a picture of ____________________

HUMU-HUMU-NUKU-NUKU-A PUA'A


C G7 C
SAY "HU-MU - HU-MU" (hu-mu - hu-mu) SAY "NU-KU - NU-KU" (nu-ku - nu-ku) SAY"A-PU-
D7 C G7 C G7
A'A" (a-pu - a'a) "HU-MU - HU-MU-NU-KU-NU-KU-A-PU - A'A________." " HU-MU -
C G7 C
HU-MU" MEANS TO SWIM (hu-mu - hu-mu means to swim) "NU-KU - NU-KU" IS THE NOSE (nu-ku-
D7
nu-ku is the nose) "A-PU - A'A" IS THE PIG (a-pu - a'a is the pig) SO IT'S A
C G7 C D7 G7 C - F - C - F
FISH WITH A PIG-LIKE NOSE. "HU-MU - HU-MU-NU-KU-NU-KU-A-PU - A'A____________.

*"humuhumu" is the Hawaiian family name of the trigger fish (Balistidae). Its scientific name is Rhinecanthus Rectangulus.

Gosline, William A. and Brock, Vernon E.:

Handbook of Hawaiian Fishes U.H. 1960 Pp. 291-294

Words & Music by Irmgard Farden Aluli
Edna Pualani Bekeart

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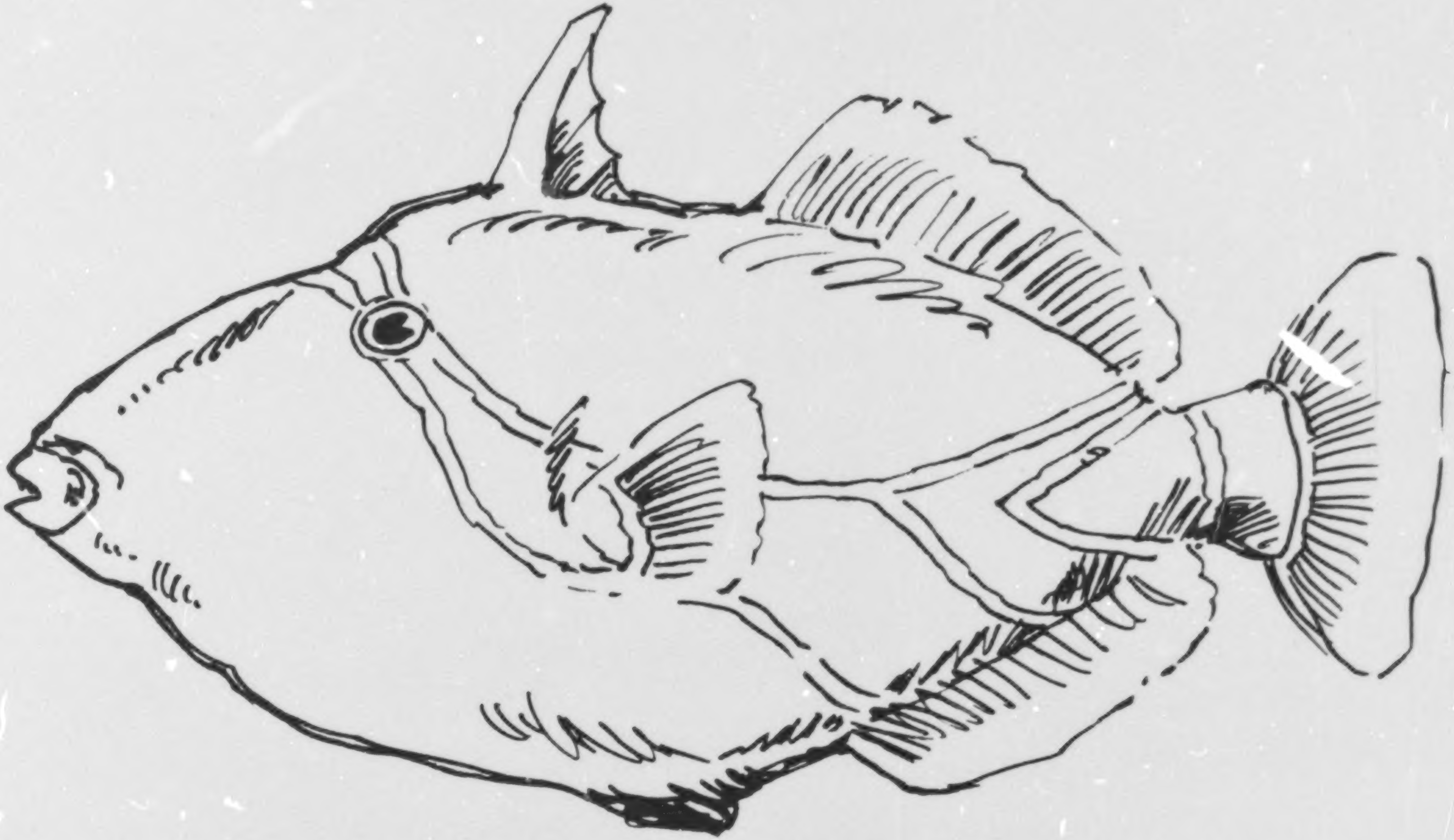
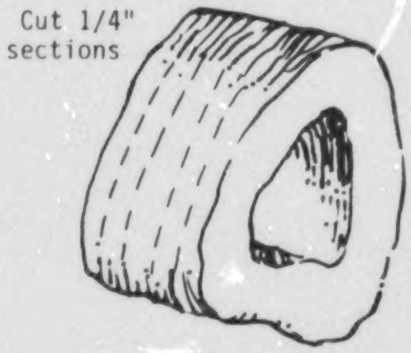


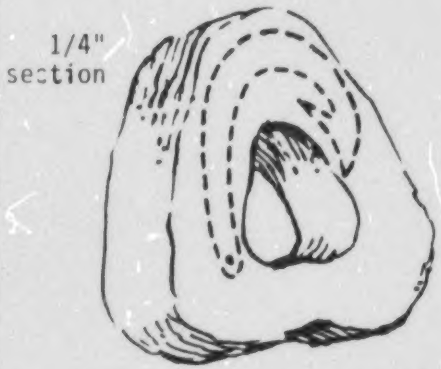
468

469

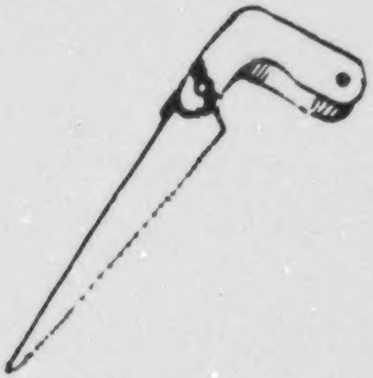
FASHIONING A FISHHOOK



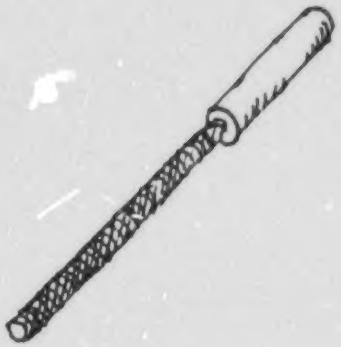
Clean and dry a soup bone. Using an electric band saw, cut the bone into 1/4" sections as shown by dotted lines.



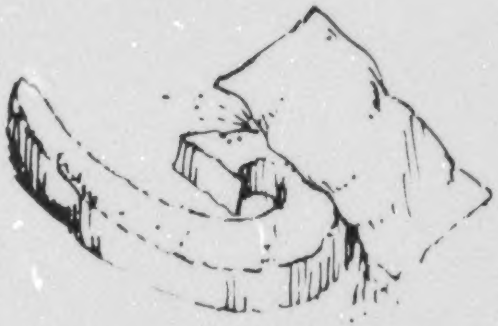
Draw fishhook shape on to a 1/4" section of bone.



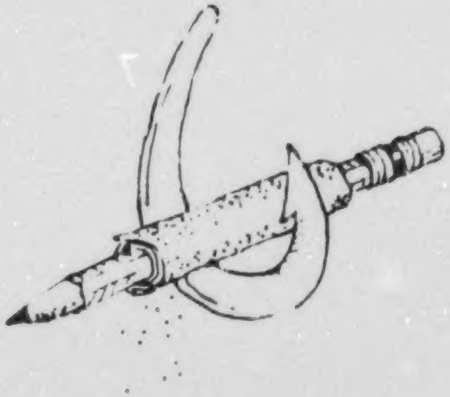
Cut out hook using a single edge saw.



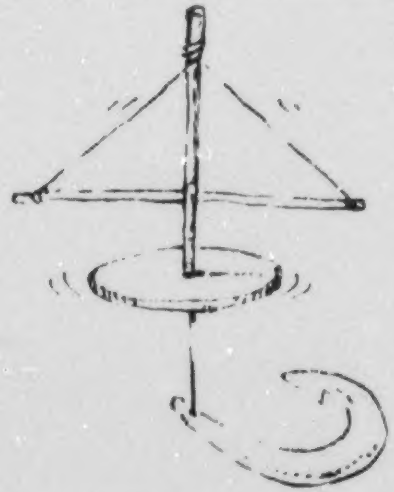
Use a rounded file or rasp to follow the shape.



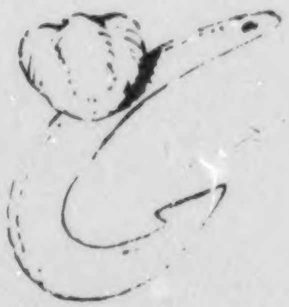
Sand with a sandpaper until the edges are smooth.



Roll the sandpaper into a roll to do the rounded corners and edges.



Drill a hole for the kaula (string or cord)



Rub the finished bone with kukui nut oil.

"LIFE IN ANCIENT HAWAII - FOODS" - A SUPPLEMENT

Fish - Procuring - Religious Implications

Fish, including shellfish - main protein-giving elements. Pig, dog, chicken, wild birds furnished some additional protein, but because of comparative small supply they were marked for chiefs, not commoners.

Catch portioned to all within the 'ohana, the related community.

Chiefs became epicurean in their taste, demanded rarities, or regal service - such as the supplying of live fish from far places. (8:1)

Rule - take only part of supply of fish from a feeding place - other fish wouldn't move in if all fish gone. Fish fed cooked sweet potatoes (and later, other introduced vegetables, like pumpkin) until fish became accustomed to spot.

Visited the spot frequently and became fat. Belief that gods might become displeased by greediness and waste. Fishing prohibited during spawning season. (8:12-13)

Earliest fishing laws were carry-over of kapu. First written laws - 1839 by Kamehameha III. Some relinquishing of royal fishing grounds, others to protect from class abuse. 1900 - investigation of entire subject of fisheries and laws relating to fishing rights in the Territory of Hawai'i. Most complete review with recommendations made but not carried out as yet. (8:15)

Kahuna - prescribed certain fishes as acceptable to the gods - sometimes fish was essential object to offer the gods, as well as to eat after a period of illness. Fish used in many other ceremonies. (8:8)

Certain sea creatures, mostly sharks became 'aumakua (family god); were fed with regularity; recognized as individuals. Eel, turtle, octopus also became 'aumākua. (8:34)

Kū'ula - (red Kū) - lesser god of fishes and fishermen. Hina-hele (traveling Hina) was mate. Hina was female goddess of many names, signifying her duties and powers. Personal gods ('aumākua) regarded as friends and protectors of all faithful worshipers.

Ko'a - each fishing shrine dedicated to a particular god, usually Kū'ula, often adjacent shrines, one female, one male. Often dedicated to a certain fish. Many kinds of offerings to gods, mostly fish from catch. (8:34-47)

Images - usually made of stone - some carved with human likeness - some with fish form. Sometimes carried along on canoes or tied with lines to be near fish. (8:38-9)

Hawaiians believed each creature of the sea had its counterpart, kauna, or analogous form, in some living thing of the land - plant or animal. Āholehole, Awa, Kūmū, 'Ama'ama, and Humuhumunukunukuapua'a considered "sea pigs" and were substituted when pigs were scarce for ceremonies. (8:42-3)

Like all birds, all fish eaten. None poisonous as in some other parts of Polynesia. Gall of 'O'opuhue (Porcupine Fish) considered poisonous. Kūmimi (crab) and 'Ea (sea turtle) considered poisonous. (9:4)

All crustacea esteemed as food. Echinoderms were eaten - 'Ina, Hāwa'e, Wana - types of sea urchin; Pipipi (Nerita), Pūho'okani (conch), Leho (cowrie), 'Opihi (Limpets) - all shellfish large enough to extract meat. (9:5)

Certain fish kapu to women (women were killed if caught eating these):

Ulua - Crevally - (Carangidae)
Kūmū - Goatfish - (Upeneus porphyreus)
Niuhi - Man-Eater or Great Grey Shark - (Carcharodon carcharias)
Palaoa - Sperm Whale
Nai'a, Nu'ao - Porpoise
Hāhālua - Manta Devilfish - (Manta birostris)
Hīhīmanu - (Craxy) Sting Ray - (Dasyatis brevis)
Pualu - Surgeon Fish - (Acanthurus fulginosus)
Koholā - Another species of whale (9:5)

During pregnancy, the Aku, 'Ōpelu, mullet, or any other white-fleshed fish was kapu. Couldn't salt any fish. If improperly salted so it might spoil, the child would have a periodical catarrhal condition of the nose, most unpleasant. Couldn't string fish as umbilical cord might strangle child. (5:18)

Procuring:

1. Children - took what they could from shallows and shallow reefs and ate it raw or cooked. When older, imitated the elders, getting small fish and limu from sheltered waters, later from deeper waters.
2. Women - gathered 'O'opu (Gobies) and 'Ōpae (shrimp) from mountain pools and streams by feel of hand, poking with stick, turning over stones, with nets; dammed streams when overflowed during freshets.
3. Po'o Lawai'a - head fisherman and company of apprentices in employ of a chief, or may be chief himself. Fishing was life's occupation. Knowledge handed down and passed on included techniques of manufacture and use of apparatus needed; methods of capture; habitats of various fish; seasons of their spawning; their coming and going if the fish moved in schools; particular peculiarities of response to attempts at capture; judging of weather; divining the meaning of omens in dreams and clouds; recognizing stars as indicators of time and direction; bird flights in direction of fish schools. Had to have rapport with gods of fishing and own personal gods and know how to manipulate canoe and choose and train assistants. Watcher (kilo) on shore very important person - directed and signaled fishermen. (8:5)

474 475

Methods:

1. Catching by Hand. Men and women searched rocks and shallows. Small calabash tied to waist to receive catch.
2. Spearing - typical spear - slender hardwood poles, 6 to 7 feet long with single sharp point. Also speared underwater and fished at night with kukui torches.
3. Slip Noose - mostly fishing for sharks - first stupified with 'Awa then noosed and dragged to shore.
4. Gill Nets, 'Upena Ku'u - net with 2 to 2½ inch eyes set across fish run. Enmeshed fish later removed by hand. ('upena ho'olewalewa)
5. Seine Nets, 'Upena Pāloa - 150 to 900 feet long, made with a head or top rope studded with wooden floats and a foot or bottom rope with stone sinkers. Favorite method of using seine nets - surround school of fish on sandy-bottomed fishing ground. Nets set by fishermen in canoes under direction of kilo (watcher) or "look-out" in prow of canoe or on high promontary on shore. These nets used for present-day hukilau fishing. ('Upena kō lau)
6. Scoop Nets - names of nets depended on type of fish to be caught. Pliable wooden rod bent into oval; ends met to form handle; fine meshed net fastened to wooden loop. Used by women to catch small fish and shrimp. Two parallel rods might be used to form rectangular two-handed scoop net. ('Upena - ahuulu; hōuna; uluulu)
7. Dip Nets - flexible rods supported a square or rectangular net. Dipped into water with a piece of bait to attract crabs. Or, a live Uhu tied through gill and mouth by cord which allowed it to swim naturally within the net. Fish served as decoy and attracted other Uhu into net. ('Upena - 'āki'iki'i; pāki'iki'i)
8. Bag Nets - net with a bag or enclosure into which fish were driven. Were large nets with small mesh. ('Upena - kolo; papa; po'o) Used to catch Mālolo (Flying Fish); 'Ōhua (a small, highly prized fish); sharks; and others. Throw nets ('upena - kiloi; kiola) were introduced by Japanese fishermen.
9. Traps, Hīna'i - usually made of fibers such as the aerial rootlets of the 'Ie'ie vine. Used in fresh and salt-water fishing.
   a. Low, circular, basketlike with entrance on top. Stone sinker held trap in place. Bait - crushed shrimp, crabs, Wana (sea urchin), or sweet potatoes - attracted fish to opening.
   b. Long, cylindrical - set without bait in fresh water streams. 'O'opu (Gobies) swam into trap, lifted out of water usually by women.
   c. Funnel-shaped - used by women to catch shrimp in streams.
10. Fishhook and Line:
   a. One-piece fishhook (Makau) made with pearl shell, human bone, dog bone and teeth, bird bone, whale ivory, turtle shell, occasionally wood. May be unbarbed or made with inner, lower, outer or shank barbs.
   b. Two-piece fishhook - wood with bone points or two pieces of bone.
   c. Composite fishhook - Aku (Bonito) lure (Pā hī aku) with pearl-shell shank, bone point and tuft of pig bristles; octopus lure (lūhe'e) - stone sinker, one or two cowrie shells, connecting-stick, bone or wooden point partly concealed by wisps of tī leaves.
   d. Fish lines (aho) and nets ('upena) made from strong cordage of inner bark of the Olonā (Touchardia latifolia) - a nettle.

(Editor's note: One method of fishing practiced by the Hawaiians is not mentioned in this Bulletin, that of hola or using the 'aunuhu and 'ākia plants to stupefy fish in the tidal pools. The twigs and bark of the plants were pounded and placed in the shallow pools. The fish would float to the surface in a stupefied condition. They were gathered in 'upena hola (nets) or baskets and cleaned. The poison in the plant did not make the flesh of the fish toxic to humans.)

e. Trolling lines - bait fish thrown from canoe. Unbarbed hook ('ōmau) attached to stout fishing pole (mākoi) by short line. Fish hooked, pulled into canoe, unhooked. Process repeated as long as canoe was with the school of fish.

Properties and accessories - well-made canoes (wa'a) with trained paddlers (kānaka hoe wa'a); gourds (ipu) or calabashes ('umeke) with close-fitting lids to transport fishing implements (would float if canoe capsized) - gourds with stoppers for fresh water (hue wai); bait (maunu) of small fish and shrimp placed whole on hooks; live bait for attracting and exciting fish; palu or fish ground into a soft bait; squid-ink bait ground in special mortars and placed on fishhooks; heavy bait sticks smeared with bait and lowered into water to attract fish. (23:1-6)

Nai'a, Nu'ao - Porpoise- names often confused with Blackfish or Killer Whale. Some people ate porpoise, some didn't. Flesh very dark, "smells worse than shark" - odor very persistent. Kapu to women and to those to whom the shark was kapu as a personal god. Pest to fishermen as they got in the way when men were fishing. Sometimes used as shark bait. (8:97)

Nai'a - Common Dolphin - (Delphinus delphis) - porpoise and dolphin family - largest family of whales - grampuses, killer whales - live mostly in salt water. Difficult to tell which species occur in Hawaiian waters because there are so many. Is a fish, not to be confused with porpoise. Dolphin chase flying fish. (13:161-4)

Preparation of fish:

1. Raw (maka) - usually ate whole fish - sometimes skin removed, or scales if tough or hard - sometimes gall bladder removed, sometimes internal organs removed. Fondness for all parts of viscera general throughout Polynesia. One who picked at fish being served, discarding flesh near bones, or skin not tough or hard, or dark flesh near bones or strongly malodorous, was to be pitied as one who didn't know how to eat fish - an uncultivated person.
2. Salted (miko or pa'akai) - fish salted (a) lightly then rinsed off; (b) cut up then salted; (c) mashed with fingers (lomi) after salting.
3. Cooked (mo'a) - some preferred cooked such as mullet, Moi, Weke, Kūmū: (a) baked in imu, wrapped in Ti (laulau); (b) broiled unwrapped either over hot coals, in hot ashes, or near hot coals to warm fish such as dried fish; (c) steamed in closed container (hākui); (d) broiled in wrappings of Ti (lāwalu).
4. Dried - method used when storms prevented fishing or for the kapu season: (a) partly dried - salted and dried to store for short periods of time; (b) well-dried - large fish scaled if necessary, cut into pieces without removing bones, thick pieces rubbed with salt, soaked in brine several days, then dried in sun. Dried hard - could be kept a year if necessary. If showed signs of not keeping, was cooked in imu and re-dried. Eaten as is or broiled. May be broiled and soaked in water to remove some of salt.

Preserving without cooking - Palu - preferred mullet, Manini, surgeon fish (Hepatus triostegus); 'Ōpelu, mackerel scad (Decapterus sanctaehelenae); 'Akule, big-eyed or goggle-eyed scad (Selar crumenoph-thalmus); Kawakawa, bonito, little tunny (Euthynnus alleteratus); Aku, ocean bonito (Katsuwonus pelamys). Sometimes only meat from head used, together with viscera after gall bladder removed. Viscera cleaned, condiments chopped fine and added. Kept in a closed vessel to ripen several days. Sometimes whole fish allowed to ripen unsalted overnight or all day, then head, tail, bones, skin removed, seasoned. (8:19-28)

Preparation, Preservation, Storage, Conservation

Methods of Cooking:

1. Broiling - kō'ala - refers more to hot coals
   pūlehu - refers to hot ashes
   pālaha - food spread out flat on level bed of hot coals
   'olala - food warmed near fire and turned from time to time
   Breadfruit and unripe bananas broiled in skins to keep flesh from burning. Food wrapped in tī called laulau. Fish also wrapped in tī called lāwalu. Broiled food distinguished by naming process after name of food.
2. Boiling - hākui, puholo - steaming in a closed container. Suitable clay for making pottery lacking in geological formation of oceanic islands, as compared to continental islands of Melanesia. Food placed in wooden bowls with water into which red-hot stones dropped. Some cooks alternated layers of food and stones then added water. Fish, greens such as lū'au (taro leaves), and lau 'uala (sweet potato leaves) especially excellent cooked this way. (When the lau 'uala is cooked it is called palula.)
3. Roasting and Steaming - Kālua - in the imu. Shallow hole dug, kindling heaped in center with larger pieces of wood on top. Layer of porous, pahoehoe stones added. Fire lighted. When stones are red-hot and wood has burned down: (a) stones are leveled; (b) covered with thin layer of smashed banana trunks; (c) ki leaves or grasses spread on layer of smashed banana trunks to prevent scorching; (d) laulau and other foods packed in, overlapped with ti, sections of banana leaves or other available leaves; (e) covered with large pieces of coconut cloth, or course kapa or plaited mats used only for this purpose; (f) may or may not be covered with earth depending on availability of earth. (17, 9:18, 7:97, 8:24)

Preservation - salt one of the necessaries - used with fish and meat, also as relish with fresh food. Manufactured only in certain places - women brought sea water in calabashes or conducted it in ditches to natural holes, hollows and shallow ponds on seacoast where it became strong brine from evaporation. Transferred to another hollow or shallow vat where crystallization into salt was complete. (3:123)

Salt pond and/or the salt flats in Hanapēpē, Kaua'i - though to be a ledge of salt crystals. Process: (a) ponds, basins, wells, and drying basins cleaned of mud, debris, and scum; (b) salt water dipped from salt wells where water seeps into wells; (c) stands in curing or shallow standing basins for preliminary evaporation process for 2 to 3 days; (d) partially evaporated brine dipped into 8 to 12 drying basins - the two inches of solution takes about two days to dry out in good weather; (e) pans refilled every other day; (f) after first month, 3 to 4 inches of clear, brownish salt ready for bagging (15)

Salt pans painted with solution of 'alae clay and allowed to dry before water is poured in. Salt crystals can be "colored" with the water and 'alae solution after drying process and when salt crystals are being crushed into smaller pieces with stone pounders. (Discussion on tape - with Museum informant, June, 1967)

Storage: leftover foods and water stored in a cool place; decorated gourds suspended in kōkō nets and hung on a pole or rack near the house. (14)

Ponds used to store live fish; some enclosed where fish were fattened; some had gates allowing smaller fish to go in and out, but larger ones kept inside. Some were salt-water ponds for storing and fattening the mullet and awa, milkfish (Chanos chanos). Often, stones with limu added to pond to increase the food supply. Fresh and brackish water ponds used for ō'opu, āholehole, and shrimps. (8:6)

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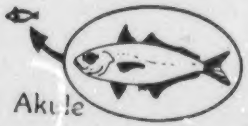
GAME SHEETS
"Kanaka Lawai'a" and "Go to the Head of the Fish"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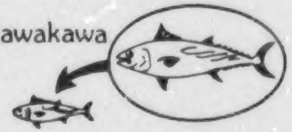
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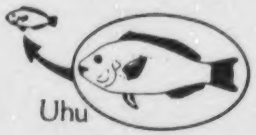
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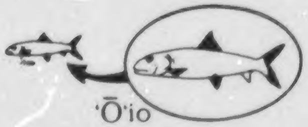
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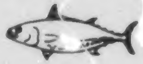
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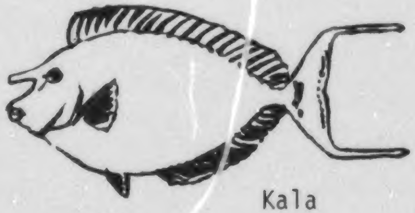
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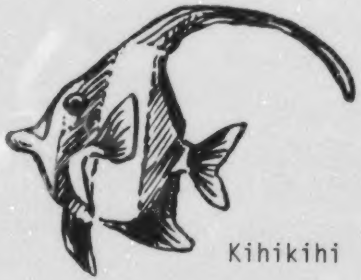
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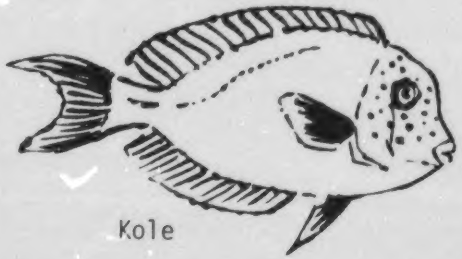
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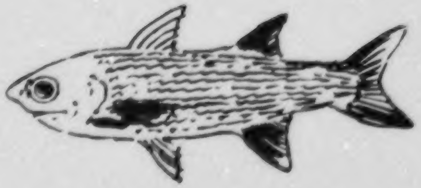

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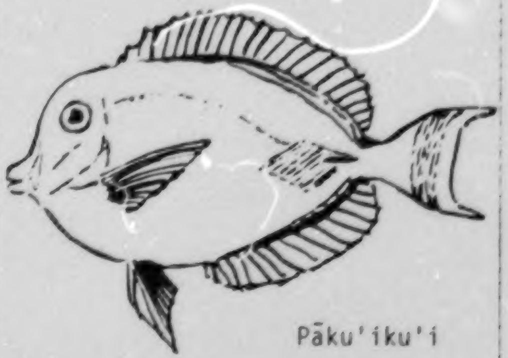

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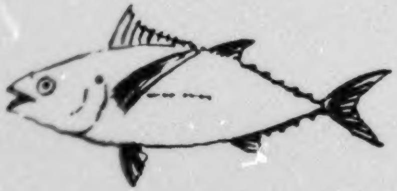

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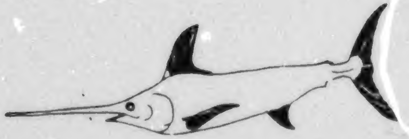

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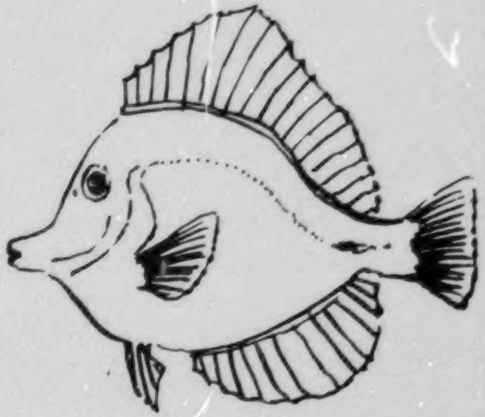

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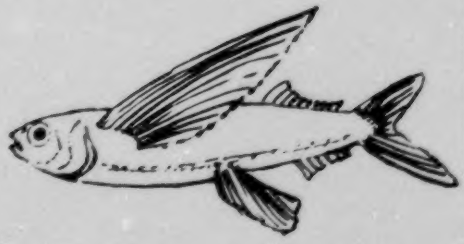

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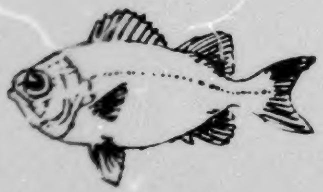

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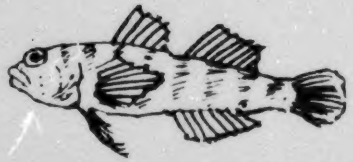

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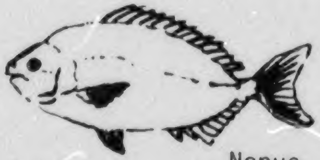

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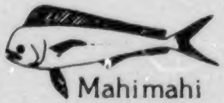

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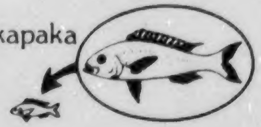

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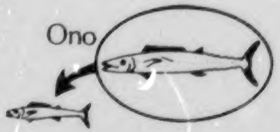

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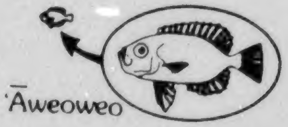

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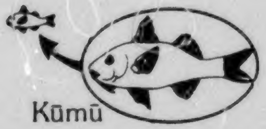

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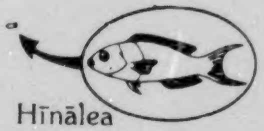

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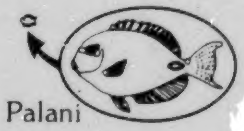

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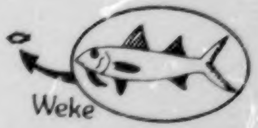
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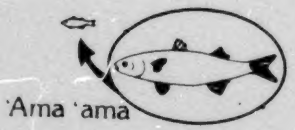
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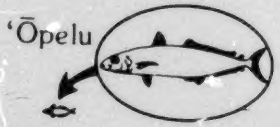
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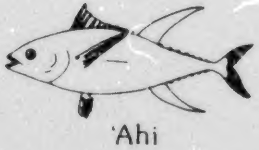
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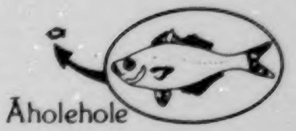
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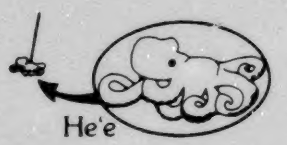
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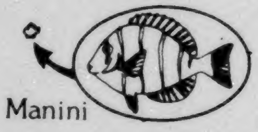
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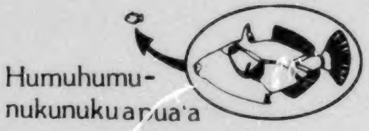
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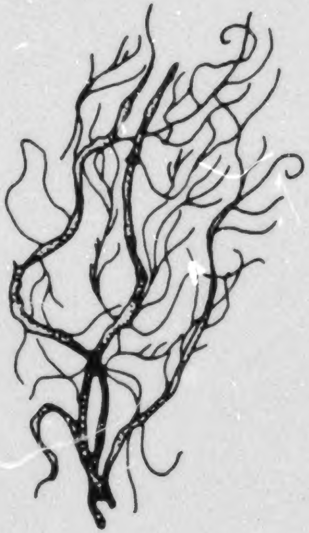
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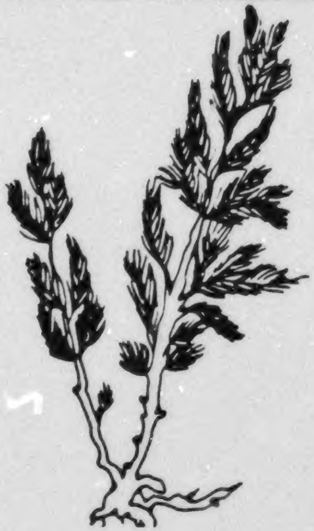
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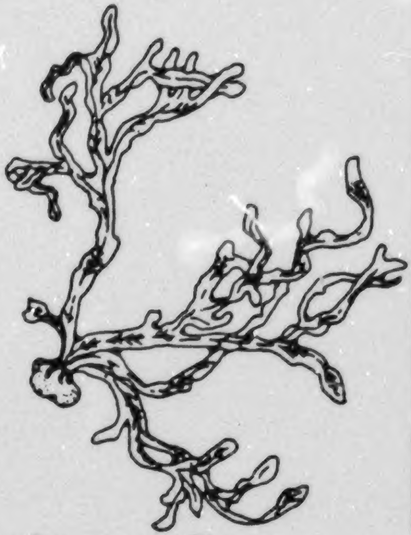
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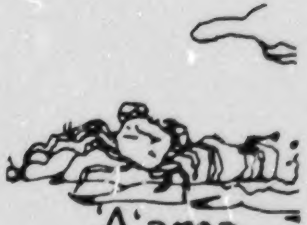
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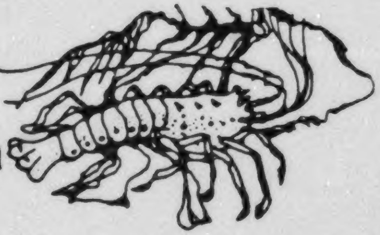
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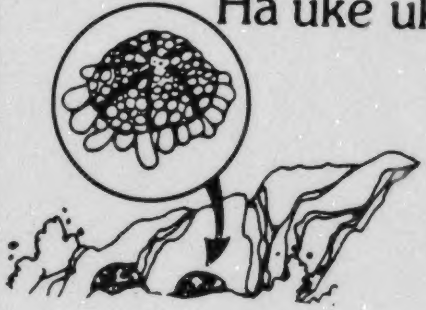
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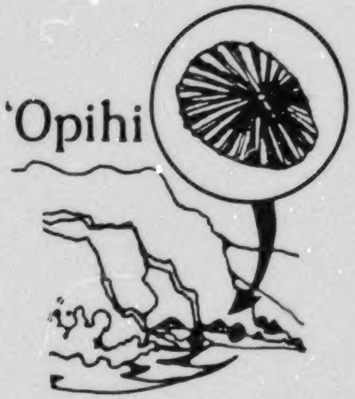
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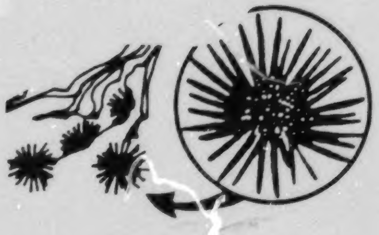
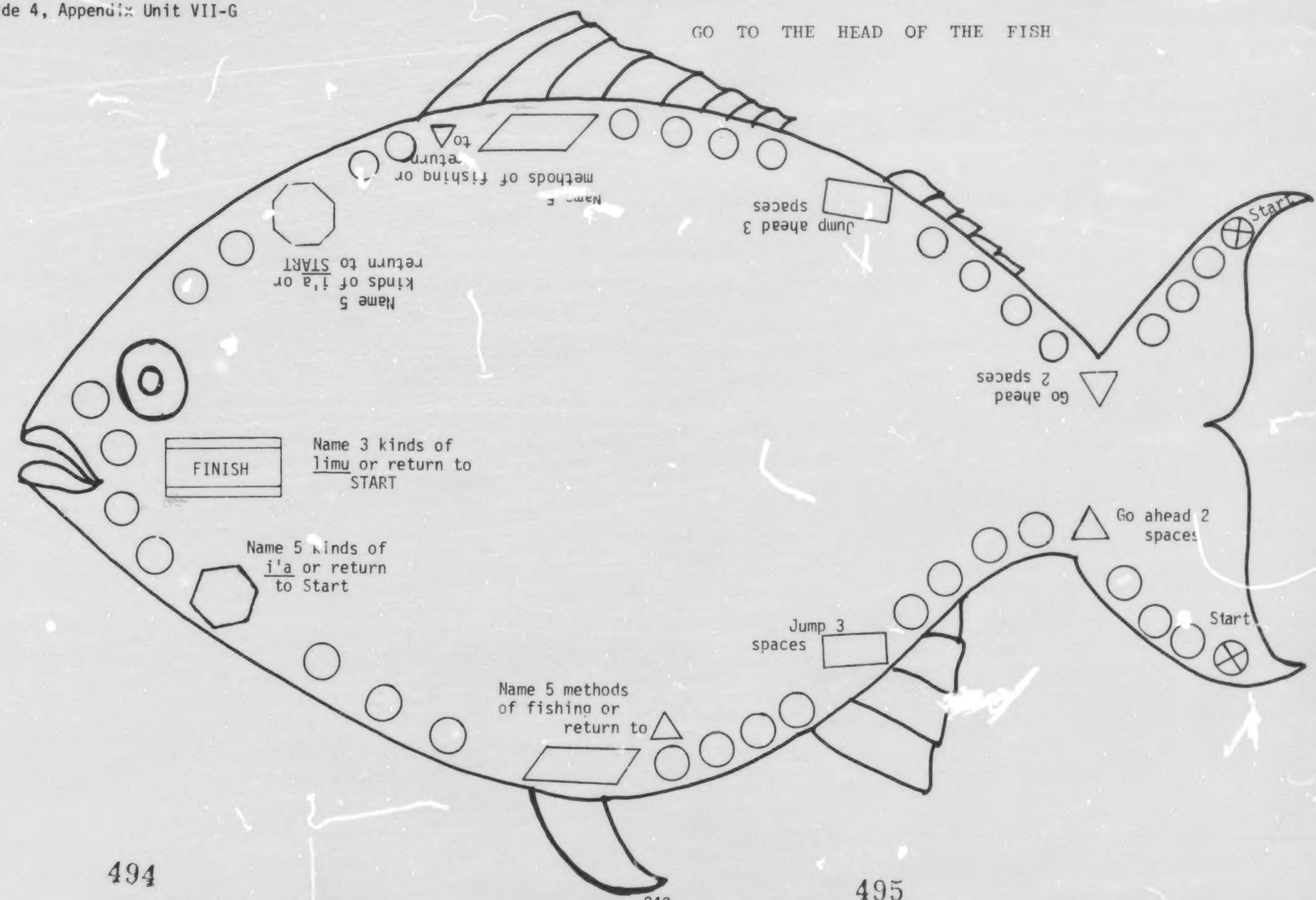
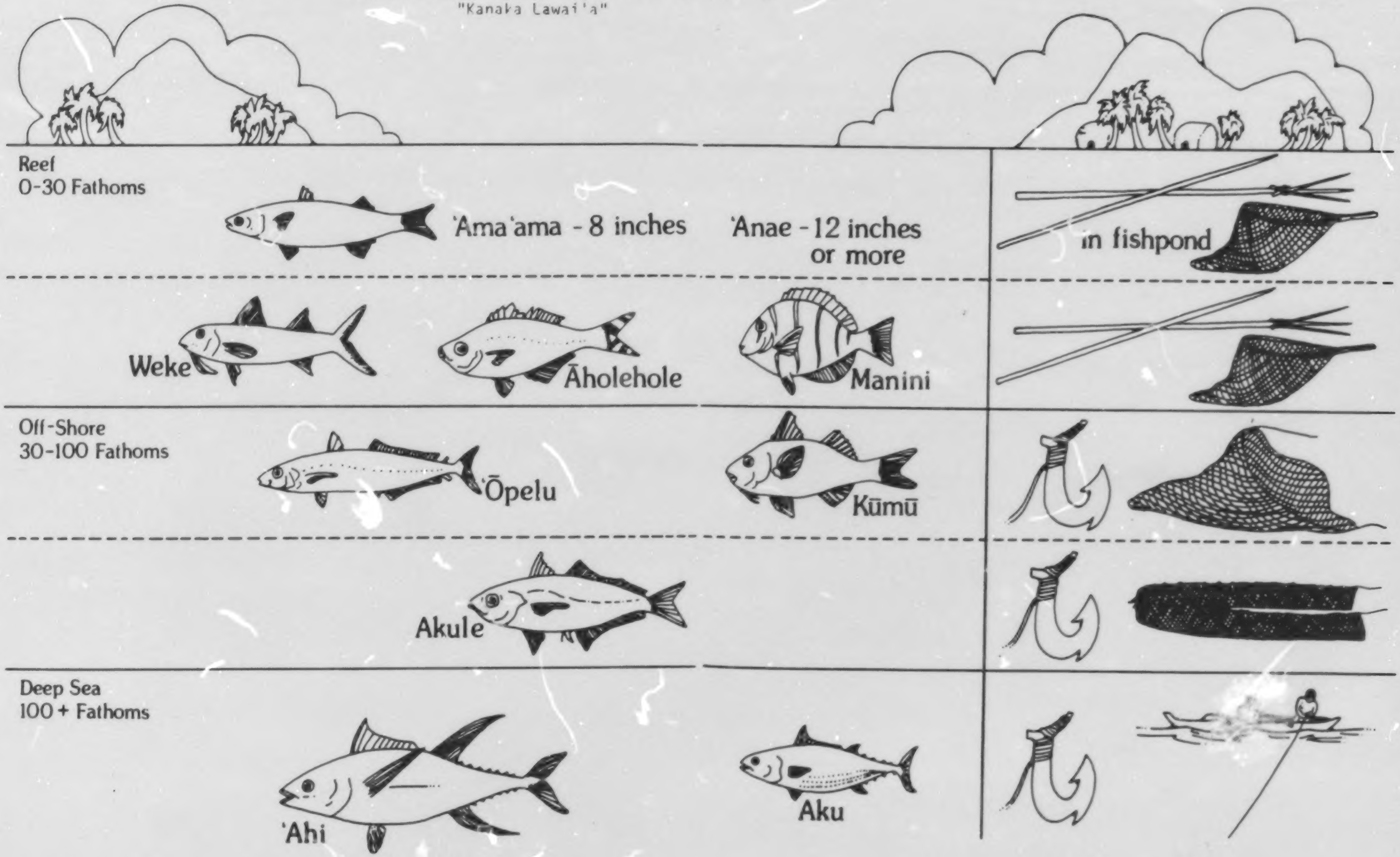

Wana

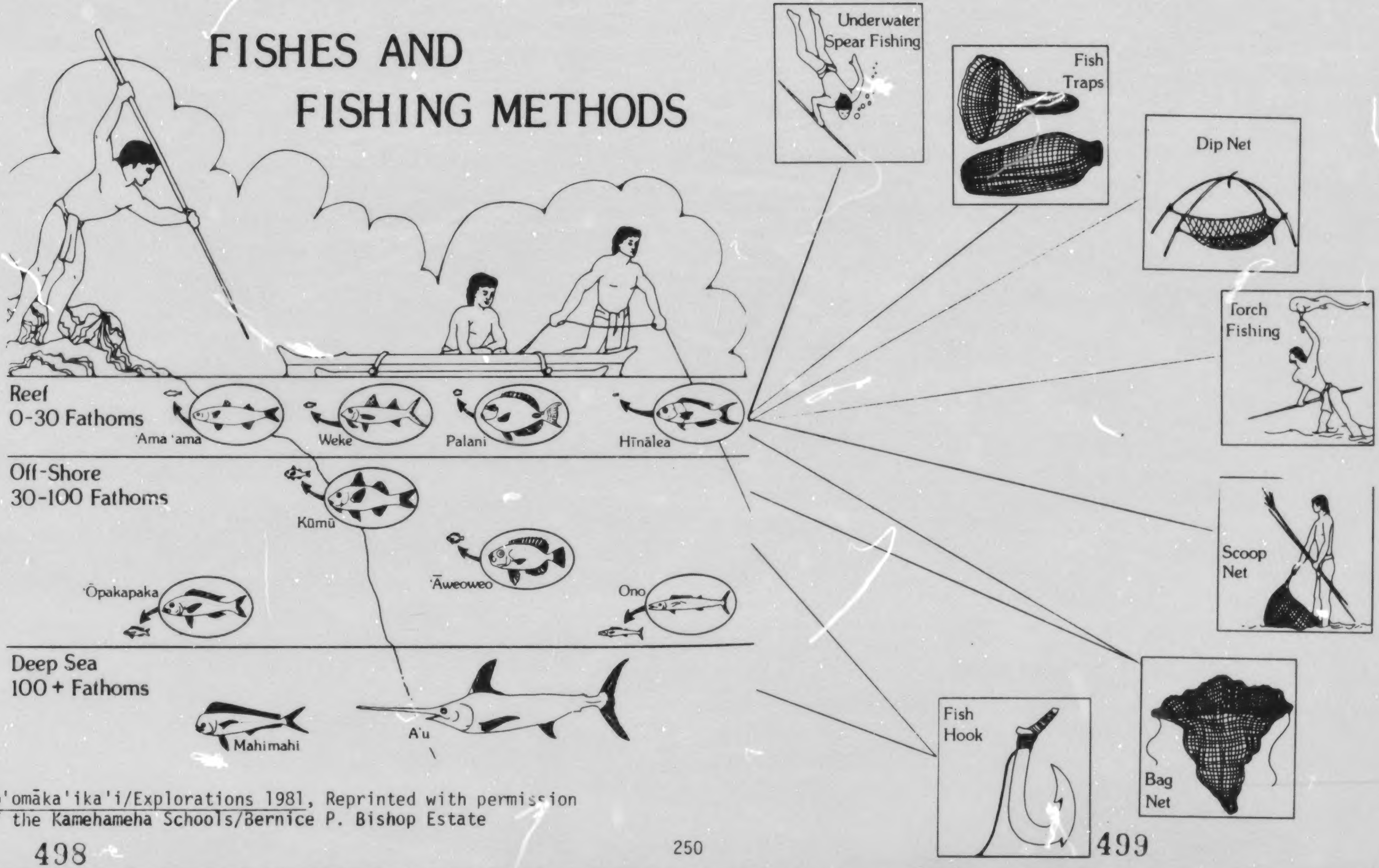
GO TO THE HEAD OF THE FISH


Start
Go ahead 2 spaces
Jump 3 spaces
Name 5 methods of fishing or return to
Name 5 kinds of i'a or return to Start
FINISH
Name 3 kinds of limu or return to START
Name 5 kinds of i'a or return to START
Name 5 methods of fishing or return to
Jump ahead 3 spaces
Go ahead 2 spaces
Start

ANSWER SHEETS FOR "Go to the Head of the Fish" and "Kanaka Lawai'a"


Reef
0-30 Fathoms
ʻAmaʻama - 8 inches
ʻAnae - 12 inches or more
in fishpond
Weke
Āholehole
Manini
Off-Shore
30-100 Fathoms
ʻŌpelu
Kūmū
Akule
Deep Sea
100 + Fathoms
ʻAhi
Aku

FISHES AND FISHING METHODS


Underwater Spear Fishing
Fish Traps
Dip Net
Torch Fishing
Scoop Net
Bag Net
Fish Hook
Reef
0-30 Fathoms
'Ama 'ama
Weke
Palani
Hīnālea
Off-Shore
30-100 Fathoms
Kūmū
'Āweoweo
'Ōpakapaka
Ono
Deep Sea
100 + Fathoms
Mahimahi
A'u

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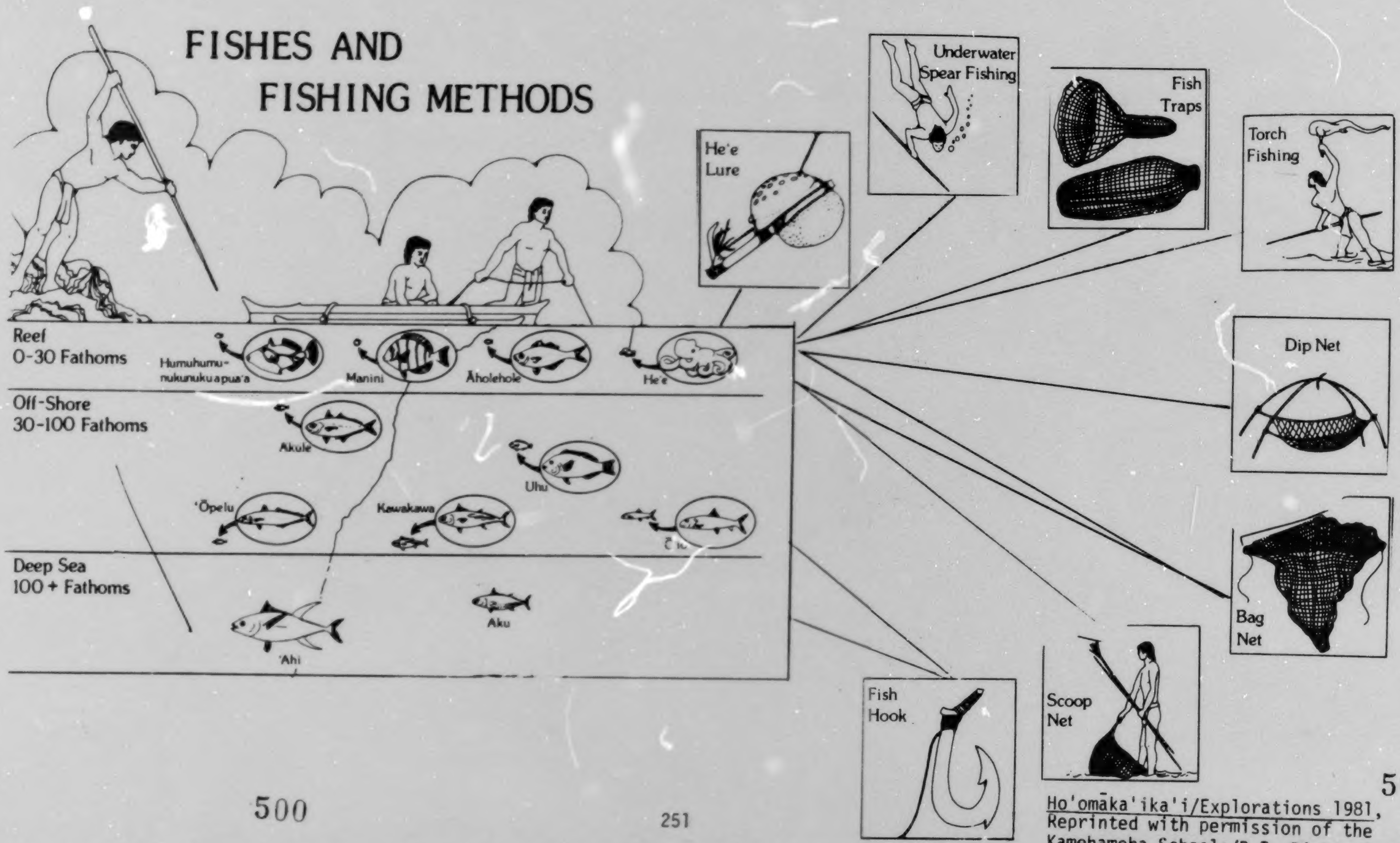
FISHES AND FISHING METHODS


Reef
0-30 Fathoms
Humuhumu-nukunukuapua'a
Manini
Āholehole
He'e
Off-Shore
30-100 Fathoms
Akule
Uhu
'Ōpelu
Kawakawa
'Ō'io
Deep Sea
100 + Fathoms
'Ahi
Aku
He'e Lure
Underwater Spear Fishing
Fish Traps
Torch Fishing
Dip Net
Bag Net
Scoop Net
Fish Hook

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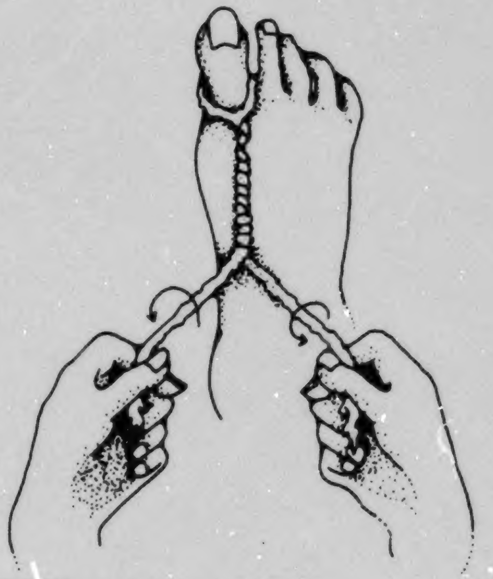
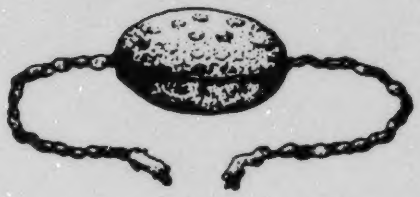
MAKING HAU CORDAGE (Twisted Method)

1. Cut young hau saplings between 1" and 2" in diameter to workable lengths.
2. Strip the bark and soak in water approximately 2 weeks. Change water frequently.
3. Clean off outer bark and throw away.
4. Leave inner bark in the sun until dry. The inner bark can now be stored in a dry place until ready for use.
5. Tear into strips about 1/8" wide.
6. Choose a strip and begin by hooking it around your toe or something stable.
7. Twist each side in the SAME direction and then twist the sides around each other.
8. When one end gets short, join another to it by taking another strip and bending it so that a small portion of the new strip will be twisted into the original long strip, and the long end will be added to the short end.
9. Continue until cord is long enough for a pendant onto which a polished kamani nut will be strung.





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FISHING

by Margaret Young

Fishing was a constant, necessary occupation in early Hawai'i. For some people fishing was an occupation, for others it was a duty to fulfill, for most people it was a pleasure, and for chiefs it was a favorite sport.

Everyone knew some techniques for getting fish. Children freely took what they could from the shallow reef areas and ate their catch raw or cooked. They learned more techniques for fishing as they grew older. Women spent long hours in the shallow waters gathering anything that was edible. Besides helping to provide food for the 'ohana, the women also had that time to socialize with the other women. The women were also the ones who fished in the mountain streams and pools for 'o'opu and 'ōpae.

Fishing was one of the most skilled occupations of the Hawaiian men; and for those for whom it was a profession, it was their life occupation. The po'o lawai'a had extensive knowledge of the sea and he was held in high esteem. His knowledge had been passed on from generations before him and he had to choose and train those he wished to become his apprentices. There were many methods of fishing and each method required different equipment and training.

Fishing was done at night and during the day. There was inshore fishing, offshore fishing and deepsea fishing. Some of the variety of methods used to catch fish were: (1) catching fish by hand; (2) spearing; (3) fishing with a slip noose; (4) net fishing with 'upena ku'u, 'upena pāloa, 'upena ōpae, 'upena pāpa'i, 'upena uhu, and bag nets; (5) fishing with traps (hīna'i); and (6) fishing with fish hook and line. The hola method of stupefying fish was also practiced using the narcotic juices of two native plants -- 'auhuhu and 'ākia.

The fishermen required an assortment of properties and accessories. They needed well-made canoes with trained paddlers. Gourds or calabashes with close fitting lids were needed to contain their fishing implements. The gourds were able to float if the canoe capsized and thus protected the fishing implements. Gourds were also needed to store fresh water. The fishermen needed small fish and shrimp for use as bait, for live bait was generally used.

Ponds were built and used to store and fatten fish and also to raise fish. Salt water ponds were used mainly for storing and fattening the 'ama'ama (mullet) and the awa (milk fish). Fresh and brackish water ponds were used for the 'o'opu, āholehole and for 'ōpae (shrimp). Another storage place for fish was in the taro patches that were found almost anywhere.

There were a great many religious ceremonies connected with fishing, and there were many kapu to be observed in everything connected with fishing. Every ko'a (fishing shrine) had in it a fish god or Kū'ula. Each fisherman had his own kū'ula which was any stone god, carved or natural, used to attract fish and/or cause them to be plentiful. Kū'ula shrines were started by 'Ai'ai in honor of his father, Kū'ulakai, who lived at Aleamai on East Maui and built the first loko i'a (fish pond). Fishermen visited their kū'ula before and after fishing since they believed that supernatural help was needed to help them succeed in their fishing. Appropriate ceremonies were performed and small kū'ula were often carried out to sea in the wa'a (canoes). Large kū'ula were set up along the shore to guide the kānaka lawai'a (fishermen).

Certain kapu were observed when fishermen prepared their fishing gear and when the canoe was launched. Certain customs were observed when the first fish was caught. When a new canoe was christened or a new net or hook was used for the first time, particular ceremonies were carried out.

Careful preparations needed to be made before going fishing. Strict kapu were observed as hooks were made and lashed. The entire family had to observe the kapu in strict silence. A prayer was offered before the fisherman set out and while he was away the wife could not sleep, nor gossip, or quarrel.

The early Hawaiians was constantly aware of the need to conserve the supply of all resources which was strongly linked to their religious belief that the gods would be displeased by greediness or waste. Kapu protected the fish and other sea life during the spawning season. Fishing grounds were never depleted as the kapu were adhered to by all the people. The heavy penalties for breaking the kapu held the people in strict discipline. This, along with their strong religious beliefs that they act according to the will of their gods, guaranteed the conservation of the sea as a great source of food for the Hawaiians.

MĀLAMA

The following lessons were developed to accompany the lessons found in the 4th grade social studies guide, Early Hawaiian Life, Grade 4, Unit VIII

CONTENT AREA	EMPHASES
SOCIAL STUDIES	The Hawaiian kauhale (housing compound) Location of the kauhale Types of hale Process of building a hale Materials and tools Role of religion Roles of the 'ohana members Furnishings
SCIENCE	Investigation into how the early Hawaiians selected sites for their hale (houses) Factors considered were the: lay of the land rains, winds tides location of burial sites, heiau, stone walls kapu
LANGUAGE ARTS	Listening to a reading and identifying The various posts used in building the framework of a hale The Hawaiian vocabulary for the components of the framework Reading and discussing stories and legends about how children learned to become experts Interviewing community people To gather information about life in a kauhale (commune) To give the children an opportunity to relate with community elders

pp. 167-186, "Shelter."

LEARNER OBJECTIVES	APPENDICES
See Early Hawaiian Life pp. 172 - 173 for more objectives. • Describes the way of life of the early Hawaiians as a result of adaptation to the environment. • Describes how availability of certain materials and paucity or lack of other materials directly affected the development of many elements of Hawaiian material culture. • Contrasts modern ways of providing warmth, communication and shelter with the way these things were carried out in early Hawai'i.	
• Describes the way of life of the early Hawaiians as a result of adaptation to the environment. • Describes some of the natural phenomena in Hawai'i using their Hawaiian names. • Describes some of the physical landmarks and attributes of Hawai'i, natural and human-made, using their Hawaiian names. (cliff, mountain, fish pond, river)	Unit VIII - A The Hawaiian Homestead and pictures of kauhale, pp. 265-268
• Responds to questions and makes comments using appropriate single words or Hawaiian phrases. • Imitates with correct pronunciation the Hawaiian words, expressions and phrases modeled by the teacher or kupuna. • Identifies some methods used by the Hawaiians for finding answers to questions and for solving problems such as referring to legends or keen observation. • Relates how the Hawaiians adapted foreign materials and technology to their needs when these things became available. • Compares ancient Hawaiian family life to the student's family life. • Describes the differences between the generalized education for living and specialized training that children in ancient Hawai'i received and the kinds of education a child in modern Hawai'i receives.	Unit VIII - B Ka Hale (Diagram of the frame of a hale), p. 269

CONTENT AREA	EMPHASES
LANUGAGE ARTS (CONTINUED)	
MUSIC	Songs of beloved homes about which songs have been written Composing simple songs that express *aloha* for the home Using the Hawaiian implements to express feelings Singing songs about different locations Acculturated songs dealing with *hale*

LEARNER OBJECTIVES	APPENDICES
• Identifies some legendary figures such as Pele, Maui and Hina, Hi'iaka and Lohiau and discusses some of the stories connected with these figures. • Discusses some influences of the historical events which have taken place in the student's community and surrounding areas. • Performs roles in simulation activities illustrating individual rights and responsibilities in a group situation. • Listens and accepts opinions of others in group discussions. • Recognizes that the Hawaiian culture and way of life is now a part of America's multi-ethnic society.	
• Sings selected Hawaiian songs introduced by the teacher while playing rhythmic or harmonic instruments ('ukulele, guitar or autoharp) in time with the beat. • Accompanies a Hawaiian chant using a rhythmic instrument such as an ipu, pū'ili, kāla'au, kā'eke'eke, or 'ili'ili. • Creates melodies and lyrics concerning a Hawaiian theme using English and Hawaiian words, expressions and phrases. • Explains that chant was the original Hawaiian vocal music and that instrumental Hawaiian music as we know it today was influenced by all the immigrants who later came to Hawai'i bringing new ways of singing and new instruments with which to add harmonics and texture to the music. • Defines indigenous and acculturated in relation to the fact that most cultures have music that is distinctly their own and they also have music that is a mixture of their own and that of other cultures with which they have had contact.	Unit VIII - C "Ka Inu Wai/Maika'i Ka Makani O Kohala," p. 270 D Teaching Ipu Rhythms, pp. 271-272 E Ka Mokupuni 'O O'ahu, p. 273 F "You Come My House," pp. 274-275

The following lessons were developed to accompany the lessons found in the social studies guide, Early Hawaiian Life, Grade 4, Unit VIII

SCIENCE

- The following inquiry activities deal with how the Hawaiians may have determined the best location for a typical Hawaiian hale.

1. Discuss
   a. The purposes of a house today
   b. The purposes of an early Hawaiian hale
   c. The similarities and/or differences in purposes

2. Have the children recall, from their social studies activities, the materials that were used to build a Hawaiian hale.

3. Discuss the strength of the structure in relation to the strength of the makani (winds) and ua (rain).

   a. Have the children recall their own experiences in their own homes today and ask, "Do you suppose a structure built of wooden posts and a simple framework can withstand the heavy rains and strong winds we have in Hawai'i during the winter months?"

   b. Read: Appendix Unit VIII-A, pp. 265-266.
   Show the pictures of the Hawaiian hale to the class. Have them state reasons why they think that the Hawaiian hale could or could not withstand the wind and rain.

LANGUAGE ARTS

- These language activities deal with the house building process of early Hawai'i. There are language arts activities listed in Early Hawaiian Life, pp. 179-180.

1. Read: Malo. Hawaiian Antiquities, excerpts 1-19, pp. 118-122. These paragraphs describe the steps in building a Hawaiian hale as told by Malo.

   a. Prepare a large sketch of the figure found on p. 119 of Malo's book. As you read paragraphs 4-19, label the parts of the house frame.

   b. Have the children repeat the words after you. See Appendix Unit VIII-B p. 269 for the Hawaiian vocabulary.

   c. Leave the chart up to allow the children time to practice the pronunciation of the words.

   d. Review the He aha kēia pattern with the children:

   Ask: He aha kēia? What is this? (point to a part of the frame, such as to the main post)

   Answer: He pouhana kēnā. That is a main post.

2. Talk about how children learned in early Hawai'i. Have the children discuss the "education" of the early Hawaiian children.

MUSIC

1. Teach the children some songs about hale or home. There are many homes throughout the islands that have been written about in songs. Have the children "seek out" these songs for use in the music classes. Some of the more popular of these songs are listed below. Use the 'ukulele, guitar and/or autoharp for accompaniment.

   See: Elbert and Māhoe. Nā Mele O Hawai'i Nei for songs.

   a. "'Āinahau" p. 30 - this song describes the beautiful home of Princess Ruth Ke'elikōlani who later gave it to her god-child, Ka'iulani. The song was written by Ka'iulani's mother, Princess Likelike, sister of Kalākaua and Lili'uokalani. (This song was introduced in Unit V^{b}. p

   b. "Old Plantation" p. 83 - this song honors the Ward estate built in 1880 at King and Ward streets. The Neal Blaisdell Center now stands there. The song describes the beauty of the estate and the love for the home.

   c. "Ku'u Home O Nā Pali Hāuliuli" p. 69 - this song was composed by Mrs. Eddie Hopkins. She describes her home Halekou in Kāne'ohe and the peaceful pleasure and thoughts of the home. (This song was introduced in Unit IV, p. 95.)

pp. 167 to 186, "Shelter."

SCIENCE

c. Set up a chart to show their inferences.

Could the Hawaiian hale withstand the winds and rains?	
Evidence for "yes" inquiries	Evidence for "no" inquiries

4. Have the children interview their kūpuna or some other knowledgeable person in the community.

5. Visit the Bishop Museum, Polynesian Cultural Center, Waimea Falls Park, Lapakahi State Park, or any other site that has Hawaiian hale. Encourage the children to ask questions of the guide and to observe structures carefully to estimate strength.

6. Read excerpts from the following sources:
Apple. The Hawaiian Thatched House, pp. 7-10.
Buck. Arts and Crafts of Hawai'i, Vol. II, Houses, pp. 75-82.
Handy. Ancient Hawaiian Civilization, pp.71-80.

Based on their research, have the children decide:

a. Where hale were built.

LANGUAGE ARTS

a. Ask

1) Did the Hawaiians have schools like we do today?

2) How does a person learn to be a good carpenter today?

3) How did a person learn to build a house or hale in early Hawai'i?

(Encourage the children to respect each other's rights and opinions in the discussions)

b. Read: Early Hawaiian Life, p. 206 to the children. Discuss similarities and differences in today's life as compared to life in early Hawai'i in terms of: who went to school, where they went to school, how they learned, and who did the teaching.

c. Have the children imagine themselves living in a kauhale in early Hawai'i.

1) Pretend you have been chosen to become a kahuna kuhikuhi pu'uone (expert in house site selection). You are only 6 years old and you have been chosen to study under the kahuna to become a house site selector.

2) Write a creative story describing your experiences living with this kahuna kuhikuhi pu'uone.

3. Talk about the historical events that have taken place in the community and surrounding areas.

MUSIC

2. Encourage the children to compose songs about their own homes. Have them think about all the nice things that surround the home and the feelings that they get when they are in the home. Have the kupuna help them insert some Hawaiian words that they have already been exposed to.

E.g., Gentle are the makani that blow
across the pu'u. Sitting in my home
at 'Ālewa
I think of the aloha of ku'u hoaaloha
The lā begins to lower in the sky
Casting a peaceful calm across the city.
Aloha, e Kahale'olu. (house of
pleasantness)

3. Learn chants and songs about historically famous areas throughout the islands. Use the Hawaiian hula implements and musical instruments.

a. "Ka Inu Wai/Maika'i Ka Makani O Kohala" See: Appendix Unit VIII-C, p. 270.

1) After talking about Kohala as the birthplace of Kamehameha, introduce a song that describes the wind that blows through Kohala.

2) The 'ukulele keys should be on the learning chart.

3) Have the children beat the pā kāhela on the ipu (gourd).

See Appendix Unit VIII-D, pp. 271-272 for instructions.

SCIENCE

b. What direction the hale would face to get ventilation through the single door and yet avoid the strong winds that sometimes blow over the islands.

c. Whether or not there were bugs or insects to contend with; if so, how they affected the living comfort in a hale.

d. The character of the hale during the seasons:

1) How did the structure of the house keep the Hawaiians cool during the summer? Warm during the winter?

2) How did the hale fare during rainy periods? Was there a great deal of deterioration during the wet season? Why?

7. Discuss the following suppositions

a. Suppose there were termites in early Hawai'i.

b. Suppose there were mosquitoes. How would these insects affect the architecture of the hale? How would they change the use of the hale?

c. Suppose there were earthquakes. If you lived by the ocean, how would they affect your hale? What would happen if you lived in a cliff area and an earthquake occurred? Would the same be true today with modern houses?

LANGUAGE ARTS

E.g.: Kohala students can talk about the birthplace of Kamehameha I. Mōkapu students may discuss Heleloa Beach on Mōkapu where the Hawaiian gods met to create the first Hawaiian man, according to legend.

a. Conduct a lesson on "How to interview effectively."

1) Make a list of questions the children feel are important to be answered.

2) Talk about communication techniques: listening with undivided attention, showing aloha and ha'aha'a (humility), speaking in the kanaka o'o (adult) realm.

b. Encourage the children to interview people within the community about early Hawaiian events and those that took place later when the immigrants began to arrive. Have them tape these interviews and share them with the class.

1) Practice conducting interviews in the classroom.

2) Prepare with the children a list of questions to use in the interviews.

c. Prepare a map of your area. As the children share their tapes, have them pinpoint the location of their events on the map. Write a one to two sentence description of the event on a wall chart.

MUSIC

b. "Kāne'ohe", p. 61 - the third verse of this song describes Mōkapu where man, according to legend, was formed.

c. "Pūpū o 'Ewa", p. 87-88.

1) Read a legend about the moku of 'Ewa. Pūku'i and Curtis. Water of Kāne, "Sharks of Pu'uloa", pp. 153-157.

2) Locate the moku of 'Ewa on the map found in Appendix Unit VIII- p. 273. Point to Pu'uloa. Ask children to describe events tha took place at Pu'uloa since the building of the dock as describ in the story.

3) Read the translation of the son to your students. Talk about:

Ka'ahupāhau - the shark goddess
Ka'ala - highest mountain peak
 on the Wai'anae range
Kiu - wind that blows through '

4) Teach the song using the 'ukule and autoharp as accompaniment.

d. There are many other songs that can taught about well known places throughout the islands. Gather these songs from your areas and tea them to the students.

SCIENCE

8. Formulate some generalizations

   a. The early Hawaiians had to be knowledgeable in meteorology and architecture in order to build shelters strong enough to withstand the natural elements of weather.

   b. The early Hawaiians made use of the resources of the environment to provide shelters for themselves.

LANGUAGE ARTS

d. After all the tapes have been shared, the children may be encouraged to construct a timeline of the events.

e. Find stories about legendary figures such as Pele, Maui, Hina, Hi'iaka and Lohiau. Locate where they lived on the islands and read about the area.

f. Plan field trips to ancient house sites to see how the houses were laid out. Point out remnants of stone walls, etc. E.g., Waimea Falls Park has a kauhale area that is being reconstructed.

g. Have the children write a description of life in the kauhale many years ago. Encourage them to use Hawaiian vocabulary that they learned in social studies while studying the housing unit. Have them share their descriptions in class.

h. Talk about the hospitality of the early Hawaiians.

   1) Welcoming strangers to come in and share whatever they had to eat. Mai e 'ai! (Come and eat!).

   2) Ask: Do people in Hawai'i still do this? What other customs have we picked up from the early Hawaiians, Japanese, and Chinese?

MUSIC

6. Introduce some songs that have influences of other cultures in them

   Song: "You Come My House"

   See: Appendix Unit VIII-F, pp. 274-275.

   a. Talk about the introduced foods mentioned in the song and the creole Hawaiian English used in the song.

   b. Have them listen to the song and try to identify the tune. (It is very similar to "Polly Wolly Doodle.")

   c. Talk about the changes in the harmonics and texture of the music.

   d. Teach the song.

SCIENCE	LANGUAGE ARTS	MUSIC
9. Have the children study the pictures in Appendix VIII-A, pp. 267-268. Have them verbalize the qualities of the environment there that made the people want to build their houses there. a. Ask: 1) Where do you think this housing compound might have been built? (Waimea Valley, Makaha Valley, Hālawa Valley, etc.) 2) Describe the weather and the general environment and tell why this *'ohana* chose this particular location. b. ETV viewing - *Science in Hawai'i*, "Hawai'i's People". This video explains the lifestyle in Waimea Valley many years ago; it relates the human population of Hawai'i and its increase until diseases were introduced and then its present increase today with tourism.	3) Have the children generalize that Hawai'i is a multi-ethnic society. i. Culmination: Have the children plan a large mural depicting a typical *kauhale* in their locality showing plants, water sources, different types of structures, etc. The actual artistic work on the mural will be done as an art activity.	

THE HAWAIIAN HOMESTEAD

by Margaret Young

A typical homestead of the Hawaiian family consisted of several houses. Unlike our homes which contain different rooms, the Hawaiians had a different house for each room. There were three basic functions of the Hawaiian house - for storage, shelter and security. Storage was needed to house possessions against sun, wind, rain and theft. Everyone needed shelter from sun, wind and inclement weather. Hawaiians spent much of the time outdoors but whenever there was a special *kapu*, they needed to hide quietly in their houses until the *kapu* was lifted.

A homestead usually included a common or sleeping house, a men's house, and an eating house, for the women and the very young children. The separate structures were as convenient as they were necessary because of the *kapu* system which forced males and females to eat and work separately.

The *hale noa*, or sleeping house, was free of any *kapu* and was the only place where men, women and children could be together. It was a common room that was shared by all and lived in at night so, by necessity, it was the largest of the structures. The interior was divided into two areas. The side near the back wall was reserved for sleeping and no one was allowed to walk or sit or play in the area. It was the custom for everyone to sleep with their feet toward the wall as a safety precaution against unexpected attacks. It was kapu to sit or step on the floor where the heads rested. Custom also determined where each person could sleep. Eating was never allowed in the *hale noa* but family members could visit with guests, chat, play quiet games or tell stories in the area near the doorway.

The *hale mua* was a smaller house near the *hale noa*, where the men made and stored their tools and weapons, carved wooden bowls and made cord for lashings and fish nets. Family gods or *'aumākua* were kept here on an altar. It was the responsibility of the head of the household to place food on the altar and recite prayers daily. Women were not allowed in the *hale mua*.

Nearby were the *imu* which were used to cook the food - one for the men and one for the women. *Hale imu* or *hale kahūmu* were shelters constructed over the *imu*. Firewood and cooking implements were stored there. The *kapu* system imposed much work on the men as it required them to do all the food preparation and cooking.

Another functional structure was the *hale kua* which was the women's workroom. Here the women beat *kapa*, made mats, and stored their materials, tools and finished pieces of *kapa* and mats. A fence was usually built around the *hale kua* to allow the women to dry their *kapa* safely.

Set apart from the rest of the structures was a tiny house called the *hale pe'a*. Women were required to stay there during their menstrual period as they were considered to be contaminated and therefore could not have any contact with the men.

People tended to gather together near good fishing grounds or near their fields of taro and sweet potato. Houses were situated along the shore or along streams, right beside a lo'i or on the slopes or hillsides.

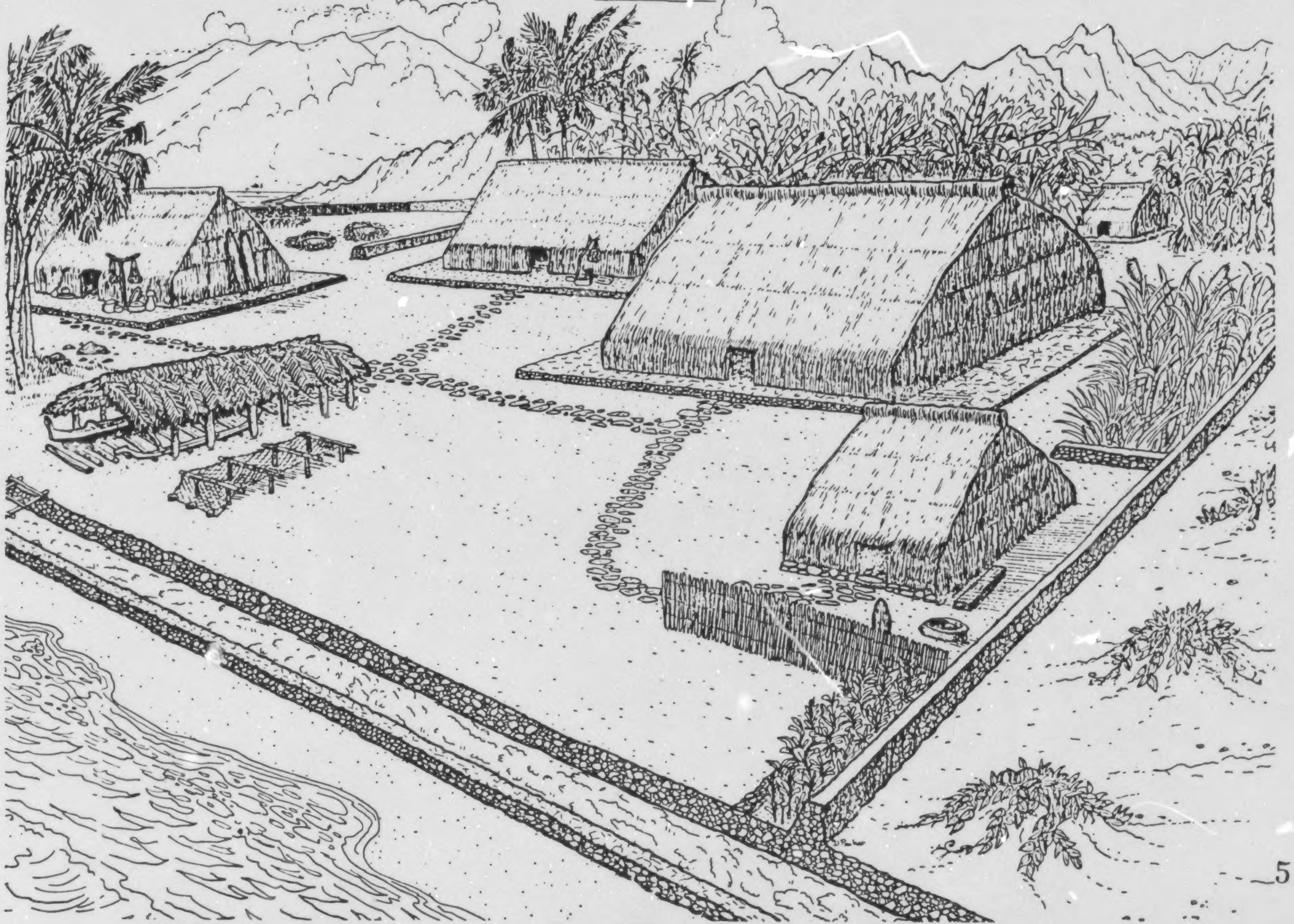
A farmer usually included in his homestead, a hale papa'a or hale hoāhu which was a storehouse built above the ground to house his tools, plant cuttings and his harvest.

A fisherman often had a large structure, the hālau wa'a, in which he kept his canoe, paddles, fishing equipment and tools. The shade provided by the hālau wa'a greatly benefited the fisherman as he worked long hours on his hooks, lures, lines and net.

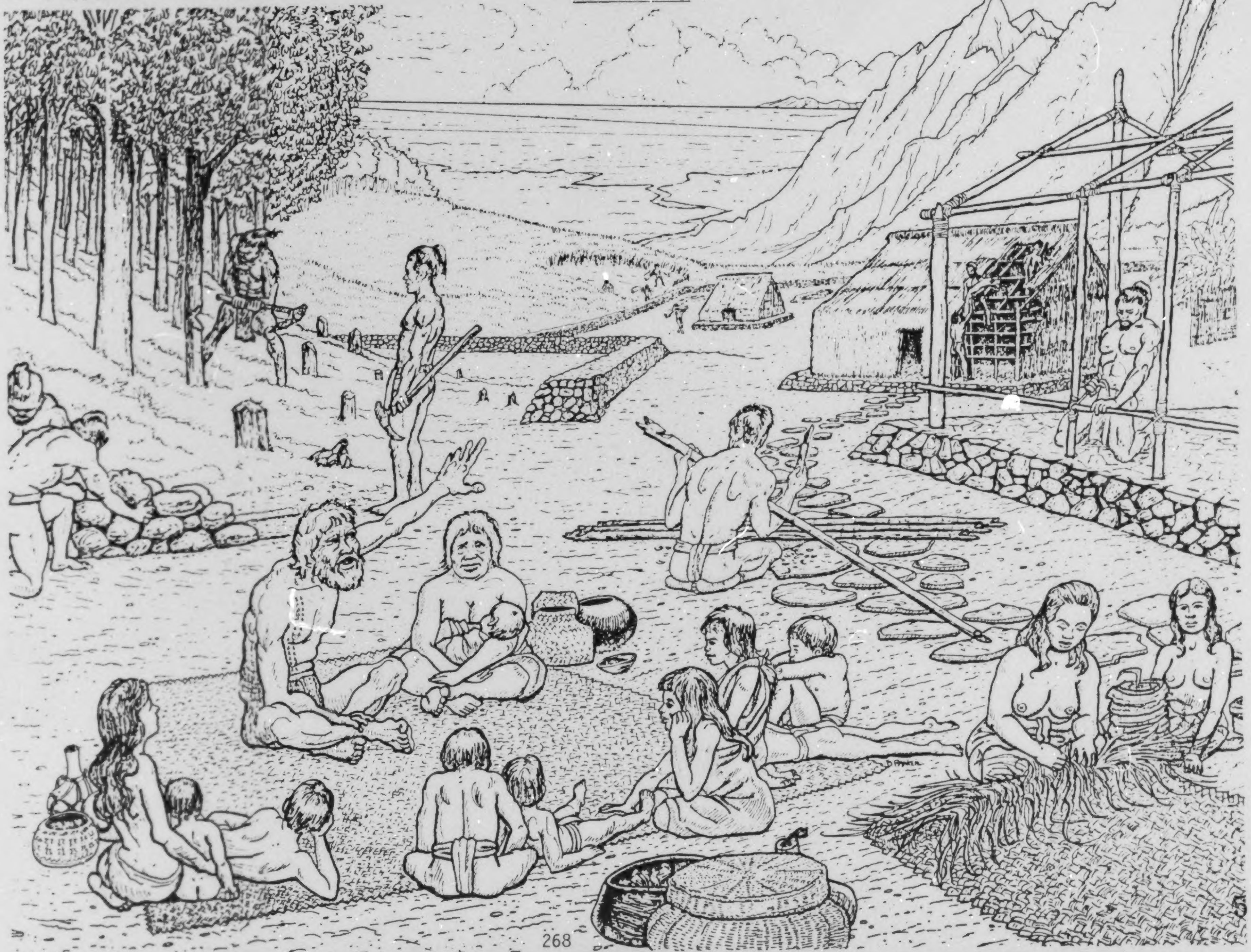
A family of commoners might live in a single one-room house, the hale noho, but families often joined others of their kin in a related group called the 'ohana. They shared some houses and formed a kauhale. There was no equivalent of a village as we know it and if several kauhale were close to each other, the term kauhale was still used. The terrain of the area, water supply and the occupation of the family determined the location of the kauhale. A typical Hawaiian family homestead was relatively isolated since kauhale were usually widely scattered. Families were accustomed to solitary living and had only occasional intercourse with neighbors or relatives.

A chief's household consisted of a number of houses and were nearly always built near the best fishing places. The houses of his relatives and retainers were built nearby, as were the homes of the men working for him. The houses of the chiefs differed from those of the commoners. They were large enough for a person to be able to stand up in one, whereas the house of a commoner was much smaller. The chiefs' houses might also contain an extensive array of furnishings of excellent workmanship and beauty.

KE KAUHALE



KE KAUHALE



KA HALE

VOCABULARY

Kua'iole - a rafter pole that ran the length of the house on top of the kaupoku

Kaupoku - ridge pole that ran the whole length of the house

O'a - rafters

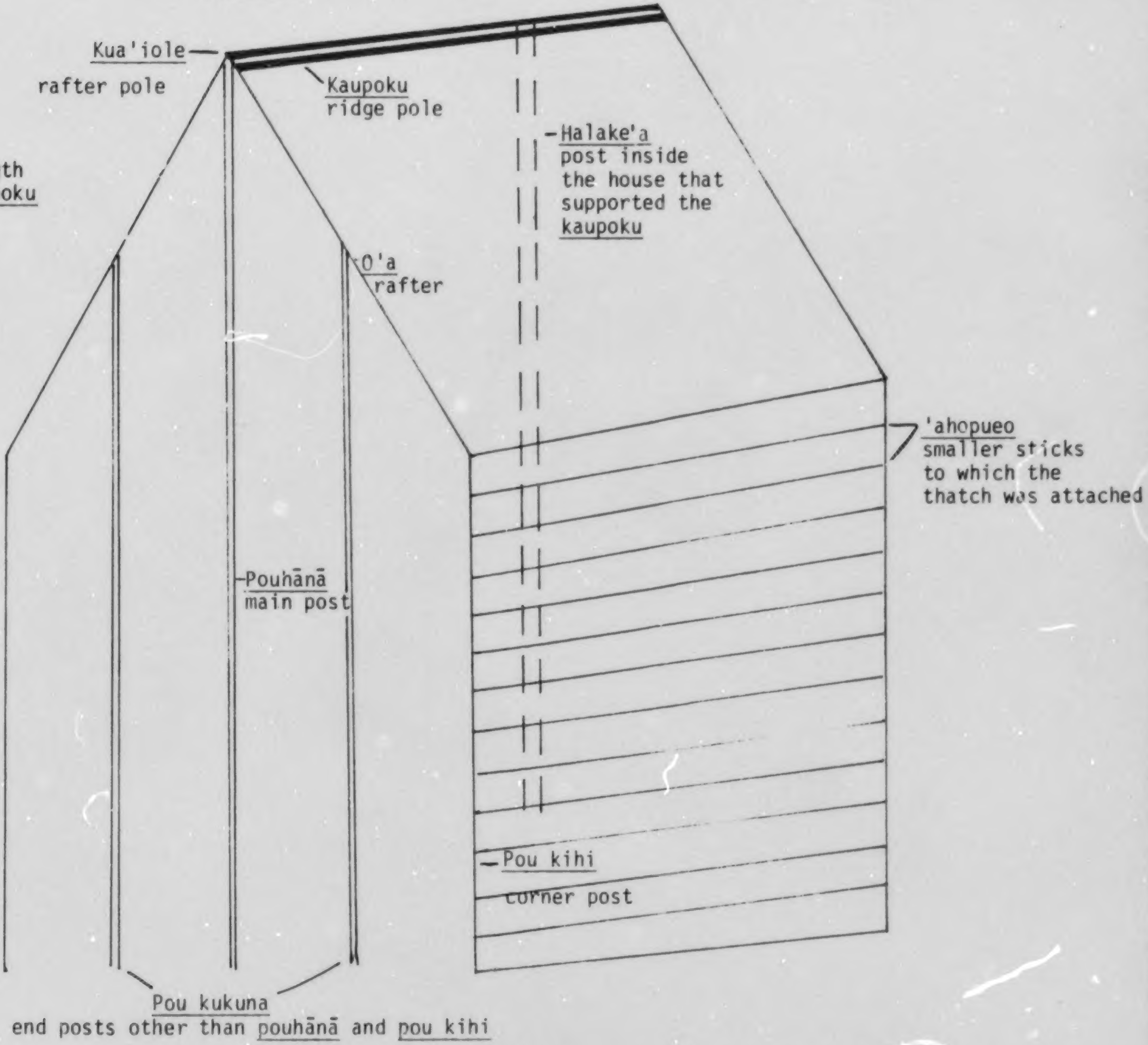
Halake'a - upright posts within the house

Pouhānā - the important two endposts

Pou kihi - four corner posts

Pou kukuna - posts standing along side the pouhana

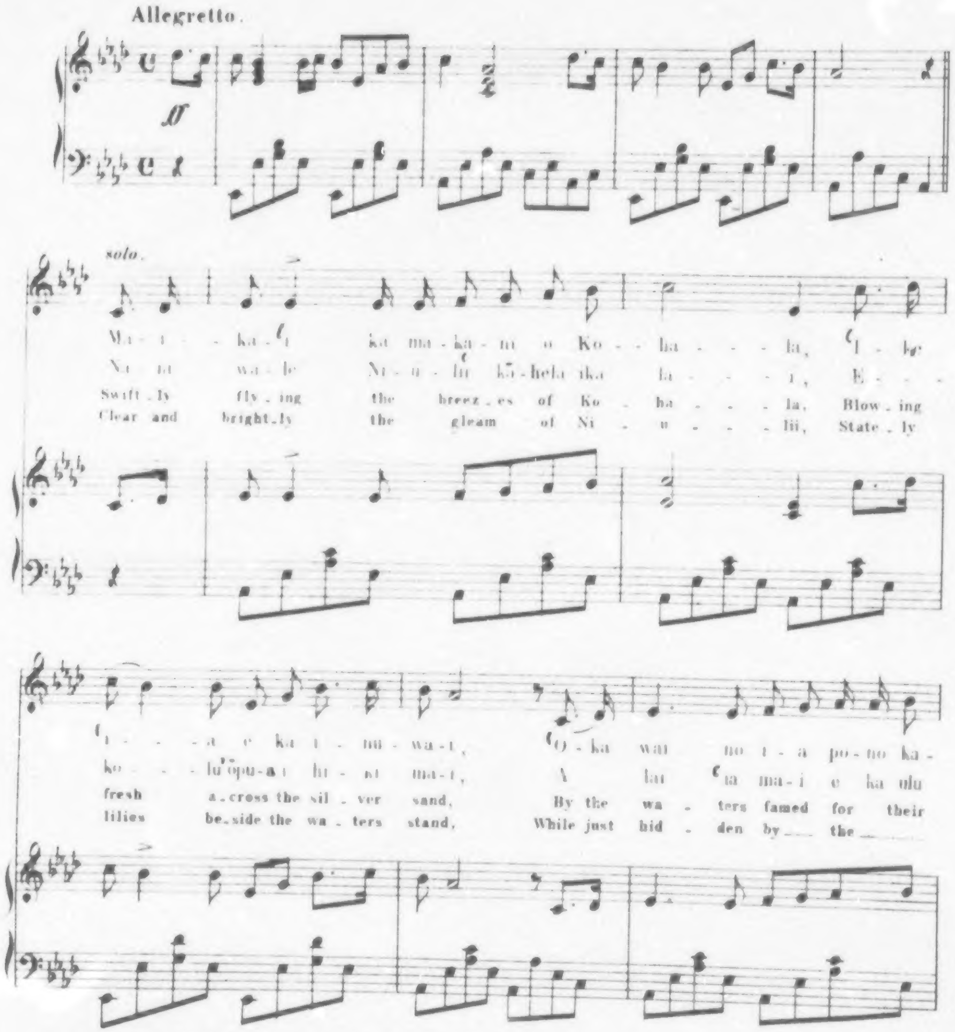
'Ahopueo - small sticks to which the thatch was attached


Kua'iole
rafter pole
Kaupoku
ridge pole
Halake'a
post inside the house that supported the kaupoku
O'a
rafter
'ahopueo
smaller sticks to which the thatch was attached
Pouhānā
main post
Pou kihi
corner post
Pou kukuna
end posts other than pouhānā and pou kihi

KA INU WAI.

KOHALA'S BREEZES

WILLIAM SHELDON. DAVID NAPE.


Allegretto.
ff
solo.
Ma - i - - - ka - ʻi ka ma - ka - ni o Ko - - ha - - - - la, ʻI - ke
Ni - u - - wa - le Ni - u - lii ka - hela ika la - - - - i, E - - -
Swift - ly fly - ing the breez - es of Ko - ha - - - - la, Blow - ing
Clear and bright - ly the gleam of Ni - u - - - - lii, State - ly
ʻi - - - a e ka i - nu - wa - i, ʻO - ka wai no i - a po - no ka -
ko - - - luʻopu - a i hi - ki ma - i, A lai ʻia ma - i e ka ulu
fresh a - cross the sil - ver sand, By the wa - ters famed for their
lilies be - side the wa - ters stand, While just hid - den by the

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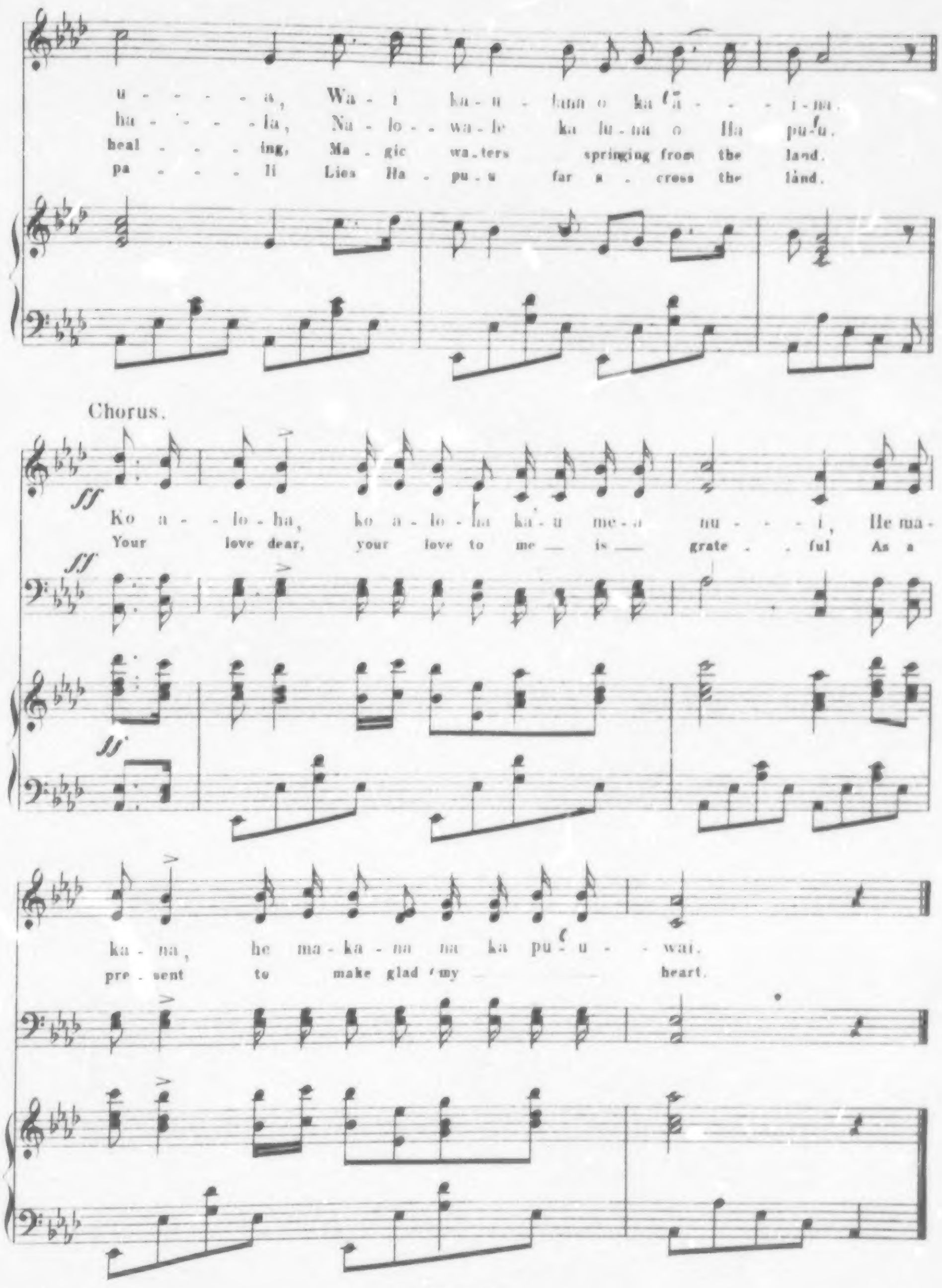

u - - - - - a, Wa - i ka - u - luna o ka ʻā - - - i - na.
ha - - - - - la, Na - lo - - wa - le ka lu - na o Ha pu - ʻu.
heal - - - - ing, Ma - gic wa - ters springing from the land.
pa - - - - li Lies Ha - pu - u far a - cross the land.
Chorus.
ff
Ko a - - lo - ha, ko a - lo - ha ka - u me - a nu - - - - i, He ma -
Your love dear, your love to me — is — grate - - ful As a
ka - na, he ma - ka - na na ka pu - ʻu - - wai.
pre - sent to make glad my heart.

Teaching Ipu Rhythms: Upper Elementary

Materials Needed: Ipu - gourd
Pale - Pad to cushion hitting of ipu on the floor or other hard surface
Empty bleach bottles or similar kinds of plastic bottles

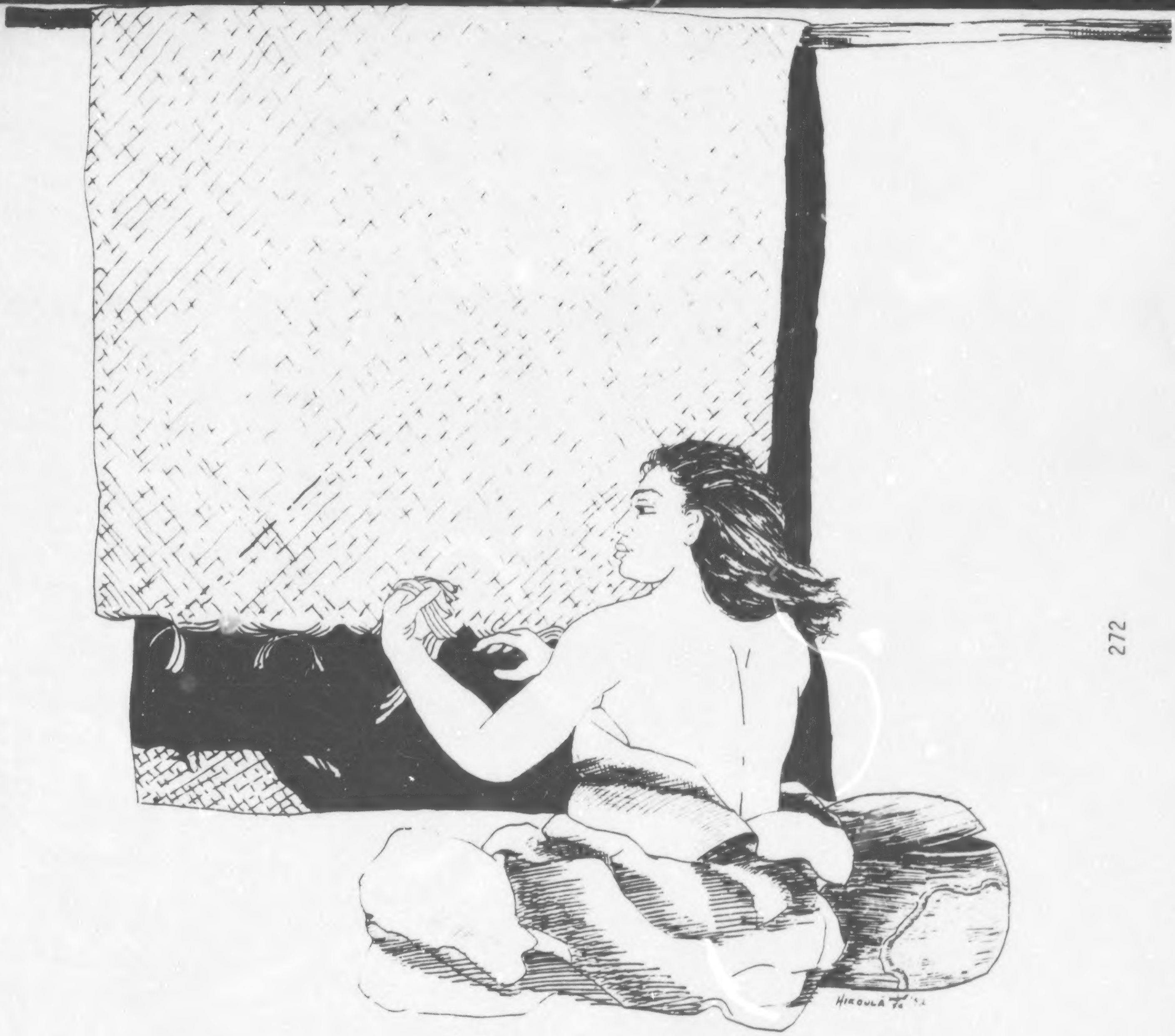
Teaching Pā.

1. Have children slap their laps and say "u".
   Do several times.
2. Have children clap their hands and say "te".
   Do several times.
3. Have children do one (1) "u" and (1) "te".
4. Explain that it is called pā.

Teaching Kāhela.

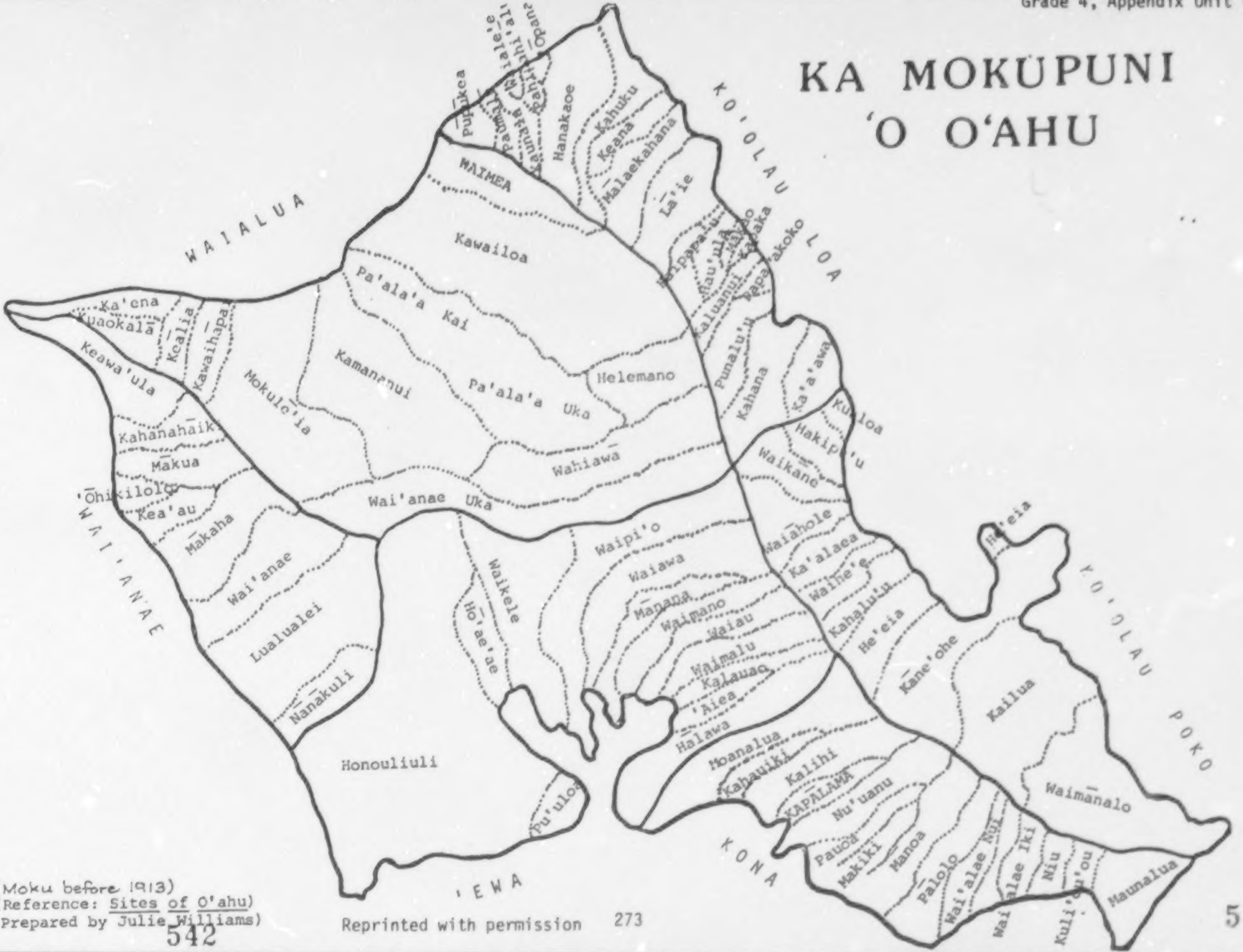
1. Have children slap their laps once, (u) and clap twice (te - te).
2. Explain that this is called kāhela.
3. Have children do 1 pā (u - te)
4. Have children to 1 kāhela (u - te - te).
5. Have children do variations after they know the difference between pā and kahela.
   a. pā, pā, kāhela
   b. Kāhela, pā
   c. pā, kāhela, pā, etc.
6. As children are able to distinguish the pā and kāhela beats, have them do their own variations. Good activity for listening skills.

When using ipu or bleach bottles, the u is tapping the object on the pale and the te is slapping the object on the side.



NOʻEAU

KA MOKUPUNI 'O O'AHU


WAIALUA
KO'OLAU LOA
KO'OLAU POKO
WAI'ANAE
'EWA
KONA
Pupukea
Paumalu
Waiale'e
Kaunala
Pahipahi'alua
'Opana
Hanakaoe
Kahuku
Keana
Malaekahana
La'ie
WAIMEA
Kawailoa
Waipapa'u
Hau'ula
Makao
Kapaka
Papa'akoko
Kaluanui
Punalu'u
Kahana
Ka'a'awa
Kualoa
Hakipu'u
Waikane
Waiahole
Ka'alaea
Waihe'e
Kahalu'u
He'eia
He'eia
Kane'ohe
Kailua
Waimanalo
Maunalua
Kuli'ou'ou
Niu
Wai'alae Iki
Wai'alae Nui
Palolo
Manoa
Makiki
Pauoa
Nu'uanu
KAPALAMA
Kalihi
Kahauiki
Moanalua
Halawa
'Aiea
Kalauao
Waimalu
Waiau
Waimano
Manana
Waiawa
Waipi'o
Waikele
Ho'ae'ae
Honouliuli
Pu'uloa
Helemano
Pa'ala'a Kai
Pa'ala'a Uka
Kamananui
Wahiawa
Wai'anae Uka
Mokule'ia
Ka'ena
Kuaokala
Keawa'ula
Kealia
Kawaihapai
Kahanahaiki
Makua
'Ohikilolo
Kea'au
Makaha
Wai'anae
Lualualei
Nanakuli

(Moku before 1913)
(Reference: Sites of O'ahu)
(Prepared by Julie Williams)

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YOU COME MY HOUSE
(Tune: Polly Wolly)
Key: C

Lyrics - Harold Haku'ole/Noelani Māhoe

C G^7
You come my house, you eat sushi, That's the Kepanī style
C
You eat tempura, tofu, sashimi, That's the Kepanī style.

Vamp: D^7 (2) G^7 (2) C (4)
C G^7
You come my house you eat bagoong, That's the Pilipino style.
C
You eat kalamunggay, pancit, talong, That's the Pilipino style.

Vamp: D^7 (2) G^7 (2) C (4)
C G^7
You come my house, for a big lū'au, That's the Hawaiian style

You eat and eat till the food all pau
C
That's the Hawaiian style.

Vamp: D^7 (2) G^7 (2) C (4)

Encourage the children to create their own versions with foods eaten by other ethnic groups.

Some ethnic groups:

Haole - Caucasian, main line American culture
Kāmoa - Samoan
Kepanī - Japanese
Kōlea - Korean
Pākē - Chinese
Pokoliko - Puerto Rican
Pukikī - Portugese

Vocabulary:

sushi - rice seasoned with vinegar and/or other ingredients
tempura - food dipped in batter and deep fried
tofu - bean curd
sashimi - thinly sliced raw fish served with shoyu sauce
Pilipino - Filipino
bagoong - fermented fish
kalamunggay - leafy tree - leaves added to meat dishes
pancit - noodles
talong - egg plant
lū'au - Hawaiian feast named for the taro tops
palusami - lū'au leaf with meat or fish and pe'epe'e (coconut cream)
pisupo - corned beef
etc. (solict names of ethnic foods from the children to create new verses)
pau - finished!

Grade 4, Unit IX The following lessons were developed to accompany the lessons found in the 4th grade social studies guide, *Early Hawaiian*

CONTENT AREAS	EMPHASES
SOCIAL STUDIES	Process of making *kapa* (bark cloth) Religion involved Roles of men and women Plants needed to make the *kapa* Materials and tools needed Steps involved Uses of *kapa*
SCIENCE	Early Hawaiian Dyes Plants used Tools and materials needed to produce the colors
LANGUAGE ARTS	Hawaiian terms for the dye colors and for shapes and for dye plants Sentence pattern: *He* ________ *kēia*. (This is a ________.) Question pattern: *He aha kēia*? (What is this?)
MUSIC	Creative compositions about *kapa* making Setting rhythmic patterns on a worksheet

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LEARNER OBJECTIVES	APPENDICES
See Early Hawaiian Life pp. 191-192 for other objectives. • Describes how availability of certain materials and paucity or lack of other materials directly affected the development of many elements of Hawaiian material culture. • Contrasts the production and use of native kapa cloth with the later acquisition and use of foreign cloth. • Discusses the necessity for cooperation and working together on individual projects such as kapa making and the pulling together of the community in large numbers to provide labor for the chiefs and konohiki for large-scale projects. (kōkua, laulima, alu like, lōkahi)	
• Describes the ethnobotanical uses of plants by the Hawaiians including food, medicine, dyes, shelter, tools, weapons, ornaments, religious and social rites.	Unit IX - A Experimenting with Plant Dyes p. 284
• Imitates with correct pronunciation the Hawaiian words, expressions and phrases modeled by the teacher or kupuna. • Asks about and identifies objects or people in pictures with Hawaiian phrases. • Describes the size, shape or color of objects or people using Hawaiian phrases. • Responds to questions and makes comments using appropriate single words or Hawaiian phrases. • Writes using diacritical marks, words and phrases previously learned orally.	
• Recognizes that selected words and expressions found in chants and songs that have been learned can be incorporated into the students active or passive vocabulary.	

CONTENT AREAS	EMPHASES
MUSIC (CONTINUED)	Song about Kapa beating "Hohoa Kuku" - new composition

LEARNER OBJECTIVES

- Writes prose or poetry in English, using Hawaiian words and expressions where appropriate, expressing the student's feelings about Hawaii, Hawaiian food, music, dance, people and history.
- Accompanies a Hawaiian chant using a rhythmic instrument such as an ipu, pū'ili, kāla'au, kā'eke'eke, or 'ili'ili.
- Creates melodies and lyrics concerning a Hawaiian theme using English and Hawaiian words, expressions, and phrases.

APPENDICES

Unit IX - B "Hohoa Kuku," pp. 285-286

The following lessons were developed to accompany the lessons in the 4th grade social studies guide, Early Hawaiian Life, pp. 187-201, "Kapa"

Grade 4, Unit IX

SCIENCE

- The following activities involve the study of the plants that provided dyes for the Hawaiian kapa.

Sources:

Buck. Arts and Crafts of Hawai'i, Vol. V - Clothing, pp. 186-189

DOE/OIS. Nā Kapa Hawai'i (Ho'onani: Artmobile Hawai'i), TAC 72-4339

Dunford. The Hawaiians of Old, pp. 119-120

Ihara. "Hawaiian Barkcloth and Kapa," DOE/Bishop Museum Research Materials Bulletin Number 1

Procedure:

1. Have the children recall some of the early Hawaiian plants that grew in the environment. List these plants on a clean chart in one column.
2. Have the children predict which plant gives which color and the part of the plant that produced the color.

We Predict

Plant	Plant Part	Color
'ōlena	tuber	Yellow

LANGUAGE ARTS

- These language arts activities review the color names in Hawaiian that were used in kapa dyeing and allows the children to review sentence patterns.

1. Encourage the children to review the names of the colors in Hawaiian. Hold up colored shapes and have them give the name of the color as well as the name of the shape.
    a. Ask: He aha kēia? (What is this?)
    b. Answer will be given as follows:
    He pō'ai 'ula'ula kēia. (This is a red circle.)
    He huinahā poni kēia. (This is a purple square.)
    c. Other shapes are:
    huinahā loa - rectangle
    huinakolu - triangle
    pō'ai lō'ihi - oval
    poepoe - circle
    d. Colors:
    halakea - whitish-yellow
    kai'ina - lavender
    ke'oke'o - white
    lenalena - pale yellow
    ma'o - light green
    melemele - golden yellow
    'ōlena - yellowish orange
    'ōma'oma'o - green
    'ula'ula - red

MUSIC

- Songs about kapa making

1. Creating songs about kapa making
    a. Take a hohoa (kapa beater) and pound it on a wooden anvil.
    b. Have the children listen to the sound as they compose rhythms of their own in their heads as you beat a 4/4 beat or a 2/4 beat.
    c. Pass out kāla'au, dancing sticks, to each child and have them share their rhythms as they are called on Continue to beat the 4/4 pattern.
    d. Add variety by having more than one share their creations.
    e. This activity can lead to some poetic lyrics that describe their feelings about the kapa beaters of early Hawai'i.
    f. Encourage the children to compose some poems and set them to chant using the minor 3rd.

SCIENCE

3. Ask the children:

   a. What is the best way to find out where the Hawaiians got their colors from? List their suggestions on the chart.

   b. How did the Hawaiians extract the colors from the plants?

   c. What kinds of materials and tools did they use?

4. Decide on the procedures to follow, gather the materials and tools necessary for experimentation and have the children bring in a variety of plants from their own homes.

5. Have available some of the plants that are harder to find such as those listed in Buck. Arts and Crafts of Hawai'i, Vol. V-Clothing, p. 187. Suggested procedures:

   a. Discuss the objective "To determine which colors are derived from which plant or plant part".

   b. Decide on how to conduct the experiments. E.g., groups of 2's, 3's, etc.

   c. Categorize the plants. E.g., grasses, ferns, berries, milky, non-milky

   d. Group volunteers to test a set category of plants

   e. Experimentation

LANGUAGE ARTS

'ele'ele - black
'āhiahia - faded
pua hina - light gray

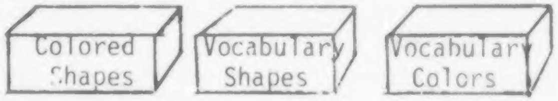
2. Set up a bulletin board showing this question and answer pattern. Place a pocket in the answer portion so that the children can place the correct color and shape as they go up to learn with each other.

Learn Your Colors and Shapes

He aha kēia? (Pin a colored shape here)

He [pō'ai] [ʻula'ula] kēia.
[Insert correct cards here]
(pockets for cards)

Play this game with a partner.
Pick and choose your cards from the boxes below.



3. Hold up pictures of Hawaiians clothed in kapa and ask the same question pointing to articles of clothing. Ask also: 'O wai kēia? (Who is this?) 'O Kupuna kāne kēia (This is grandfather.)

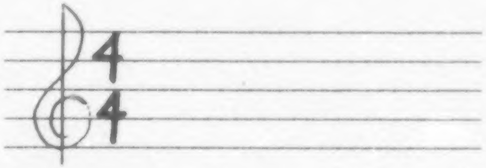
MUSIC

   g. Ask the kupuna in your school or some other resource person to translate the poems entirely or partially into Hawaiian.

2. Rhythmic patterns on a music worksheet

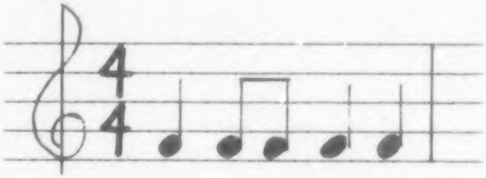
   a. Hand out a music worksheet consisting of several blank staffs.

   b. Have the children draw a treble clef signature with a 4/4 beat.



   c. Choose a note for everyone to use such as F and have the children draw their rhythmic kapa beating pattern on the staff.

   E.g.



   d. Have them write the words of their poems below the notes. They will need to draw several measures of their rhythmic pattern.

SCIENCE

1) Take each plant and test the various parts to see if any color is produced.

2) Experiment by mashing. Mix the results with:

   a) water

   b) kukui or kamani nut oil

3) Use a pandanus paint brush and apply the color to squares of muslin.

4) Record the findings on the worksheet found in Appendix Unit IX-A p. 284. Worksheet: Experimenting with Plant Dyes.

5) Share the findings and compile the data on a master chart.

6) Analysis:

   a) Do all the plants give colors?

   b) Are they true colors?

   c) Do green leaves and plant parts give off a green color?

7) Leave the discussion open to setting up new hypotheses and further research if the interest is high.

LANGUAGE ARTS

4. The children should also be able to say the names of the dye plants correctly in Hawaiian. Using the same sentence pattern, ask them to say the names of the plants.

   E.g.: He aha kēia? What is this?
   He kukui kēia. This is candlenut.

5. As they become proficient in speaking, have them write their responses.

6. Letter writing:

   a. Have the children write a letter to the museum on your island asking permission to tour the museum's kapa collection. Have them elaborate on the kinds of things they want to see and/or touch.

   b. Have them share their letters with the class. Then compose letter to be sent to the museum liaison person.

   c. Plan the field trip, tying in as many aspects of kapa making as possible (as studied in social studies in Early Hawaiian Life).

   e. After the field trip, have the children write thank you letters.

7. See other language arts activities in Early Hawaiian Life, pp. 198-199.

MUSIC

3. Teach a new song about kapa beating.

   "Hohoa Kuku" by Keli'i Tau'ā

   See: Appendix Unit IX - B, pp. 285-286 for words and music.

   a. Write the words on a chart. Have the children point out all the familiar Hawaiian vocabulary. Underline them.

   b. Talk about the steps in beating kapa as studied in social studies. Have the children attempt to interpret the song based on the vocabulary they already have and on their knowledge of making kapa.

   c. Present the English translation as written in the appendix.

   d. Teach the words to the song. (This song was composed specifically under contract to the Hawaiian Studies Program.)

SCIENCE	LANGUAGE ARTS	MUSIC
6. Using the sources listed in this lesson, have them continue their research into the materials and tools used in early Hawai'i.		
7. Use the dyes in art class to decorate kapa squares.		
8. Share the findings of each group. Check the results against the prediction chart and have the children state some generalizations.		
9. Collect the findings and have a committee set up a bulletin board display of plants, plant parts, colors derived, materials used, and procedure used.		
10. Invite a resource person to talk about the making of dyes in early Hawai'i and how Hawai'i's kapa dyes are unique in all of Polynesia. To observe the durability of early Hawaiian dyes, plan a trip to a museum to see samples.		

Worksheet: Experimenting With Plant Dyes

Plant	Plant Part Used	Color	Procedure Used

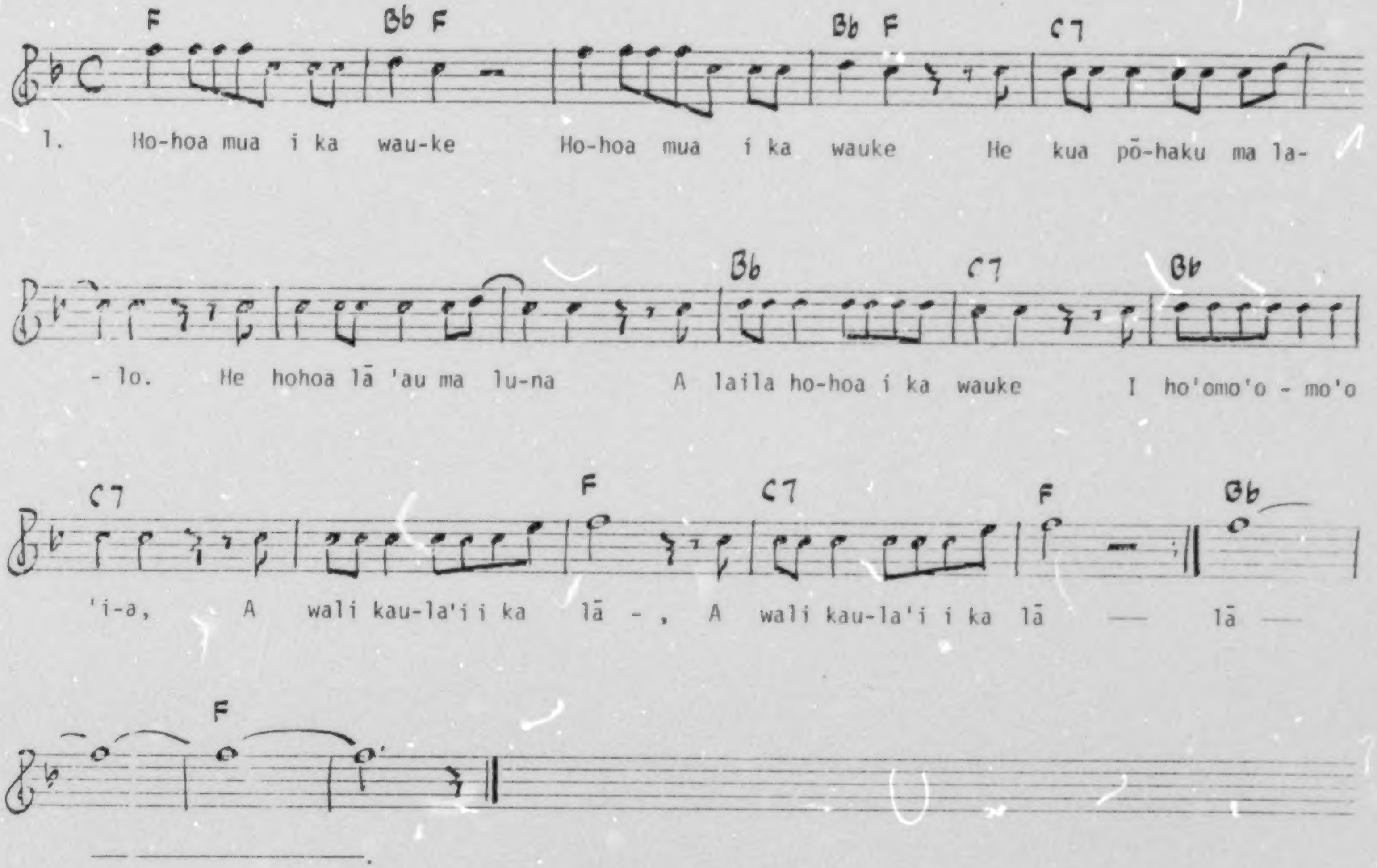
HOHOA KUKU

by Keli'i Tau'ā

Hohoa mua i ka wauke	Beat first the wauke
Hohoa mua i ka wauke	Beat first the wauke
He kua pōhaku ma lalo	A stone anvil below
He hohoa lā'au ma luna	A wooden beater above
A laila hohoa i ka wauke	Then beat the wauke
I ho'omo'omo'o 'ia	To be made into long smooth strips
A wali, kaula'i i ka lā	And spread it in the sun
A wali, kaula'i i ka lā	And spread it in the sun
Kuku hope i ka wauke	Beat after the wauke
Kuku hope i ka wauke	Beat after the wauke
He kua kuku ma lalo	A wooden anvil below
He i'e kuku ma luna	A wooden beater above
A laila kuku i ka wauke	Then beat the wauke
Ma ka hale kua	In the tapa house
A wali, kaula'i i ka lā	And spread it in the sun
A wali, kaula'i i ka lā	And spread it in the sun
Eia ka mo'olelo pōkole	Here is a short story
O ke kapa o Hawai'i nei	Of the tapa of Hawai'i nei
'Elua hana i ke kapa	Two working phases of tapa beating
Kapa 'ia "hohoa i ka wauke"	Called hohoa (beating) of the wauke
A kapa 'ia, "hana 'ia ka i'e kuku"	Secondly called i'e kuku
Hanalike i ke kapa	Working together the kapa
A wali, kaula'i i ka lā	And spread it in the sun
A wali, kaula'i i ka lā	And spread it in the sun

HOHOA KUKU

By Keli'i Tau'ā


F
Bb F
Bb F
C7
1. Ho-hoa mua i ka wau-ke Ho-hoa mua i ka wauke He kua pō-haku ma la-
Bb
C7
Bb
- lo. He hohoa lā 'au ma lu-na A laila ho-hoa i ka wauke I ho'omo'o - mo'o
C7
F
C7
F
Bb
'i-a, A wali kau-la'i i ka lā - , A wali kau-la'i i ka lā — lā —
F
— ———————.

GENERAL APPENDICES

BASIC VOCABULARY LISTS

MAPS

HAWAIIAN STUDIES PROGRAM

BASIC HAWAIIAN VOCABULARY LISTS, GRADES K-4

The Basic Vocabulary Lists which follow contain Hawaiian words which range from very basic and culturally important terms to more general ones identifying early and modern Hawaiian and imported values, practices, objects and people. The words have been drawn from the Basic Hawaiian Vocabulary Lists, #'s 1 and 2 which were reprinted in Appendix D, Hawaiian Studies Program Guide (Draft), Office of Instructional Services/General Education Branch, RS 81-0655, March 1981. The two lists were created for all learners of Hawaiian at the elementary level, whether they be in elementary school, high school, college or adult school, by Haunani Bernardino, Dr. Emily 'Ioli'i Hawkins, and Robert Lokomaika'iokalani Snakenberg.

After using the lists during the 1981-82 school year in the implementation of the Hawaiian Studies Program, District Resource Teachers and kupuna suggested that the two lists be regrouped to reflect more explicitly the vocabulary which would be appropriate for each grade level from kindergarten to sixth. The following lists are the results of a series of meetings held in the Fall of 1982. The Department acknowledges the kōkua of and expresses "Mahalo nui loa!" to the following:

Honolulu District	Solomon Kaulukukui and Kupuna Katherine Makena Harbottle
Central District	Jan Kahōkū Yoneda
Leeward District	Mililani Allen and Kupuna Elizabeth Kauahipaula
Windward District	Elsie Kawao Durante, Kupuna Jessie Pi'imauna and Kupuna Lilia Hale
State Office	Noelani Māhoe and Lokomaika'iokalani Snakenberg

These lists are constructed so that the words are grouped in categories such as social life and relations, nature, food, body parts, etc. Within each category, the words are glossed following the order of the sounds in the Hawaiian alphabet, the Pī'āpā. Words beginning with the glottal stop or 'okina (') are to be found after the words beginning with the other consonants.

The alphabetical order followed, therefore, is: a, e, i, o, u, h, k, l, m, n, p, w, 'a, 'e, 'i, 'o, 'u

This arrangement in Hawaiian alphabetical order is being applied only to initial vowels and consonants (including the 'okina) and is being done to underscore the importance of the 'okina in both pronunciation and spelling. It also serves to help the learner memorize which words begin with the 'okina by having them physically separated from the words spelled with the same initial vowel.

Social Life & Relations

kahuna/kāhuna (plural)	expert(s), priest(s)
maka'āinana	member of the common class

Nature

ahi	fire
one	sand

Hawai'i Lifestyle (hula, music, arts/crafts, games/sports)

akua	god, spirit
ho'omanawanui	(to be) patient
kumu hula	dance teacher
'aumakua/'aumākua (plural)	family guardian(s)/ spirit(s)

Food - Preparation

halakahiki	pineapple
kī'aha	glass, cup
kō	sugar cane
kōpa'a	refined sugar
*laiki	rice
laulau	method of cooking tī leaf food package in imu, or steaming in pot
lāwalu	method of cooking tī leaf food package (usually fish) over coals
lomi	to massage
maka	raw
malo'o	dry
mā'ona	(to be) full, satisfied
mea inu	something to drink
pā	plate
pa'akai	salt
*pahi	knife
*paila	boil; boiled
*palai	to fry; fried
*palaoa	flour; bread
*pepa	pepper
*pipi	beef
poke	to cut in cubes (usually fish)
*pola	bowl
pua'a	pig, pork
pūlehu	to cook over hot coals or ashes
wai hua 'ai	fruit juice
*waiū paka	butter
*'alani	orange
'ō	fork
'uala	sweet potato
'ulu	breadfruit

Body Part & Functions

ake	liver

* Hawaiianized English

kūkae	excrement, feces
leo	voice
ma'i	sick, genitals
mimi	to urinate; urine
piko	navel; top of head; genitals
poli	breast; bosom, heart (poetic)
pōloli	hungry
waiū	breast; milk
'ili	skin

Household Terms

moena	mat
ipuhao	pot
uluna	pillow
papahele	floor
kaupoku	ridgepool, roof, attic, highest point

Miscellaneous Verbs

ala	to awaken oneself, to wake up
ha'awi	to give
hānau	to be born, to give birth
hāpai	to carry; to be pregnant
he'e nalu	to surf
ho'i	to return
kākau	to write
nīnau	to ask; (a) question
oli	to chant
pā'ani	to play
pane	to answer

Miscellaneous Adjectives

lohi	slow
make	dead (to die)
momona	fat, sweet, fertile
pōkole	short
'awīwī	to hurry; fast, quick

Colors

lenalena	off-white, dingy yellow
māku'e	dark brown
uliuli	dark colors (blue, green, purple, gray) This is the color of the sea, sky, and far-off vegetation.

Clothing

holokū	long dress with a train
kīhei	shawl
kīkepa	tapa or sarong worn by women under one arm and over the shoulder of the opposite arm.
kūpe'e	bracelet, anklet
(lei) niho palaoa	whale's tooth pendant (worn about neck)

lole	clothes, dress
mahiole	feather helmet
malo	loin cloth
pā'ū	woman's wrap-arond garment (sarong, pareu, lavalava)
'ahu'ula	feather cloak or cape

Animals

*manakuke	mongoose
mo'o	lizard; reptile of any kind
nēnē	Hawaiian goose
'io	hawk

Transportation

mānele	sedan chair

Months

See K-1	exposure

---

* Hawaiianized English

Grade 3

Social Life & Relations

ali'i	chief(ly), royal, noble
hānai	to raise, feed; to adopt, adopted child
ho'oponopono	to make right (Hawiian family problem resolving)
luahine	old woman
'elemakule/'elemākule	old man/old men

Nature

ala	path, roadway
aumoe	middle of night
lepo	dirt, dirty
moana	ocean, deep sea
pūpū	sea shell
wailele	waterfall

Hawai'i Lifestyle (hula, music, arts/crafts, games/sports)

*hīmeni	to sing; song, hymn
hoe	paddle
mele	to sing; song, chant
pule	to pray; prayer; week

Food

hua	fruit
hua'ai	edible fruit
hua moa	egg
*kuawa	guava
liliko'i	passion fruit
limu	seaweed
mai'a	banana
*manakō	mango
mea'ai	food

Body Part & Functions

alelo	tongue
iwi	bone
kua	back
ku'eku'e maka	eyebrow
lae po'o	forehead
lihilihi maka	eyelash
lolo	brain
luhi	tired
na'au	intestines, guts
pu'uwai	heart

Household Terms

kelepona	telephone

Miscellaneous Verbs

heluhelu	to read

* Hawaiianized English

hiki	to be able, can
holoi	to wash, wipe, erase
lohe	to listen
moe	to lie down
'au'au	to bathe, swim
'ike	to see, know

Miscellaneous Adjectives

hu'ihu'i	chilly, cool
kahiko/kāhiko	old
'u'uku	small, tiny

Colors

See K-1	master

Numbers

0-100	master
ho'okahi	one of something - master

Days of Week

See K-1	master

Months

See K-1	exposure

* Hawaiianized English

Modes of Transportation

ka'aahi	train
moku	ship
mokulele	airplane
*Paikikala	bicycle
*'okomopila	automobile

Zoo Animals

*kamela	camel
keko	monkey
*kepela	zebra
*kia	deer
*kika	tiger
kilape	giraffe
*liona	lion
*papulo	buffalo
*pea	bear
*'elepani	elephant

Locatives/Location Words

hope	behind, after, last, in back
kai	seaward, sea, ocean
lalo	under, beneath
loko	inside
luna	up, over, above, on top
mua	forward, in front, before, first

waena	between, among
waho	outside
uka	mountainward, uplands, inland

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Miscellaneous

mea	thing, person

Numbers

0-19

iwākalua	twenty

Decades; concept of kana-

kanakolu	thirty
kanaha	forty
kanalima	fifty
kanaono	sixty
kanahiku	seventy
kanawalu	eighty
kanaiwa	ninety

Kana is a prefix which indicates that it multiplics the base work (kolu, hā, etc.)

Ho'okahi (one, alone, one of something as opposed to one in a series)	exposure

ho'okahi kāma'a	(just) one shoe
ho'okahi wa'a	(only) one canoe

Days of Week

See K-1	exposure

Months

See K-1	exposure

Clothing

kāma'a	shoe
lole wāwae	pants
mu'umu'u	loose gown
pālule	shirt
pāpale	hat

Animals

See K-1	exposure

Transportation

*ka'a	car
wa'a	canoe

* Hawaiianized English

Social Life & Relations - Plural forms

kaikamāhine	girls/daughters
kānaka	persons, people
kūpuna	grandparents
mākua	parents
wāhine	women

Nature

honua	land, earth
kuahiwi	mountain
kumu lā'au	tree
lā'au	bush, tree, herb medicine
lau	leaf
pali	cliff
'āina	land, earth

Hawaii Lifestyle (hula, music, arts/crafts, games/sports)

lei	garland; to put on a garland

Food

inu	to drink
kālua	to steam in imu

Body Part and Functions

kīkala	hip
ku'eku'e lima	elbow
ku'ekue' wāwae	ankle
kuli	knee
lauoho	hair
lehelehe	lip
manamana lima	finger
manamana wāwae	toe
niho	teeth
papakole	buttock
pāpālina	cheek
umauma	chest
'ūhā	thigh

Household Terms

kukui	light, lamp
moe	bed
pahu 'ume	drawer, bureau

Miscellaneous Verbs

helu	to count
hō'ike	to show
komo	to enter
'ōlelo	to speak

Miscellaneous Adjectives

pilikia	trouble

Social Life & Relations

inoa	name
kaikamahine	girl, daughter
kamaiki/*pēpē	baby
kāne	man, husband
keiki	child
keiki kāne	boy, son
kupuna	grandparent
kupuna wahine/kupuna kāne	grandmother/grandfather
makua	parent
makua kāne/makuahine	father/mother
wahine	woman, wife
'ohana	family

Nature

ahiahi	evening
ānuenue	rainbow
awakea	mid-day
hōkū	star
kahakai	beach
kai	sea, salty water
kakahiaka	morning
lā	day; sun
lani	heaven(ly); chief(ly)
mahina	moon
makani	wind
manu	bird
pō	night, darkness
pōhaku	rock, stone
pua	flower, descendant
wai	fresh, non-salty liquid
'auinalā	afternoon
'uku	louse, flea

Hawai'i Lifestyle (hula, music, arts/crafts, games/sports)

aloha	love; to greet
hula	dance; to dance
kapu	rules/laws; sacred
kōkua	help; to help
mahalo	thanks; to thank; to admire/like

Food

i'a	fish
kalo	taro
moa	chicken
pā'ina	to dine
poi	mashed kalo, 'uala or 'ulu
pua'a	pig
'ai	to eat; also sometimes used as the general word for the staples kalo, taro, or poi

* Hawaiianized English

'īlio	dog
'ono	tasty, delicious

Body Parts

ihu	nose
kino	body
lima	hand, arm
maka	eye
pepeiao	ear
piko	navel
po'o	head
po'ohiwi	shoulder
waha	mouth
wāwae	foot, leg
'ōpū	stomach

Household Terms

hale	house
*home	home
lānai	patio
lua	toilet
*lumi	room
noho	chair
pākaukau	table

* Hawaiianized English

puka	door; hole through something
puka aniani	window

Miscellaneous Verbs

hana	to work, to make, to do
hele mai	to come
hele aku	to go (away)
hiamoe	to sleep
holo	to go, run, sail
ho'olohe	to listen
ho'omākaukau	to prepare, make ready
kāhea	to call
kū	to stand
lele	to jump, fly
nānā	to look (at)
noho	to sit

Miscellaneous Adjectives

akamai	smart, intelligent, clever
anuanu	cold
hau'oli	happy, glad, content
hou	new
li'ili'i	small
loa	long, very
lō'ihi	long
maika'i	good

mākaukau	prepared, ready
nani	beautiful, pretty
nui	big, plenty, many, much
pau	finished, consumed, destroyed
piha	full
wela	hot

Colors

hinahina	gray
ke'oke'o	white
melemele	yellow (golden)
*palaunu	brown
*polū	blue
poni	purple
'ākala	pink
'alani	orange
'ele'ele	black
'ōma'oma'o	green
'ula'ula	red

School

*kula	school
kumu kula	school teacher
noho	chair
puka	door; hole through something

Days of the Week Exposure

Pō'akahi	Monday
Pō'alua	Tuesday
Pō'akolu	Wednesday
Pō'ahā	Thursday
Pō'alima	Friday
Pō'aono	Saturday
Lāpule	Sunday

*Months Exposure

Kepakemapa	September
'Okakopa	October
Nowemapa	November
Kekemapa	December
'Ianuali	January
Pepeluali	February
Malaki	March
'Apelila	April
Mei	May
Iune	June
Iulai	July
'Aukake	August

* Hawaiianized English

Animals

*hipa	sheep
honu	turtle
i'a	fish
*kakā	duck
kao	goat
*lāpaki	rabbit
lio	horse
manu	bird
moa	chicken
*pelehū	turkey
pipi	beef, cattle
pōpoki	cat
pua'a	pig
pueo	owl
'ekake/kekake	donkey
'īlio	dog

* Hawaiianized English

Numbers 0-19; concept of -kūmā-/-kumama-

0	'ole
1	'ekahi
2	'elua
3	'ekolu
4	'ehā
5	'elima
6	'eono
7	'ehiku
8	'ewalu
9	'eiwa
10	'umi
11	'umikūmākahi
12	'umikūmālua
13	'umikūmākolu
14	'umikūmāhā
15	'umikūmālima
16	'umikūmāono
17	'umikūmāhiku
18	'umikūmāwalu
19	'umikūmāiwa

NOTE: In modern secular use from 11 through 99, the numbers involving units one through nine are formed by using the appropriate tens number with the infix, "-kūmā-," and then the particular unit number; e.g., eleven is ten plus one, 'umi-kūmā-kahi.

In the older form, the Hawaiians used the infix, "-kumama-." Some kūpuna, especially those still active in Hawaiian churches where the Hawaiian Bible is read out loud, may prefer the older form. The children should be exposed to both forms but they should concentrate on learning [illegible] use the modern form actively.

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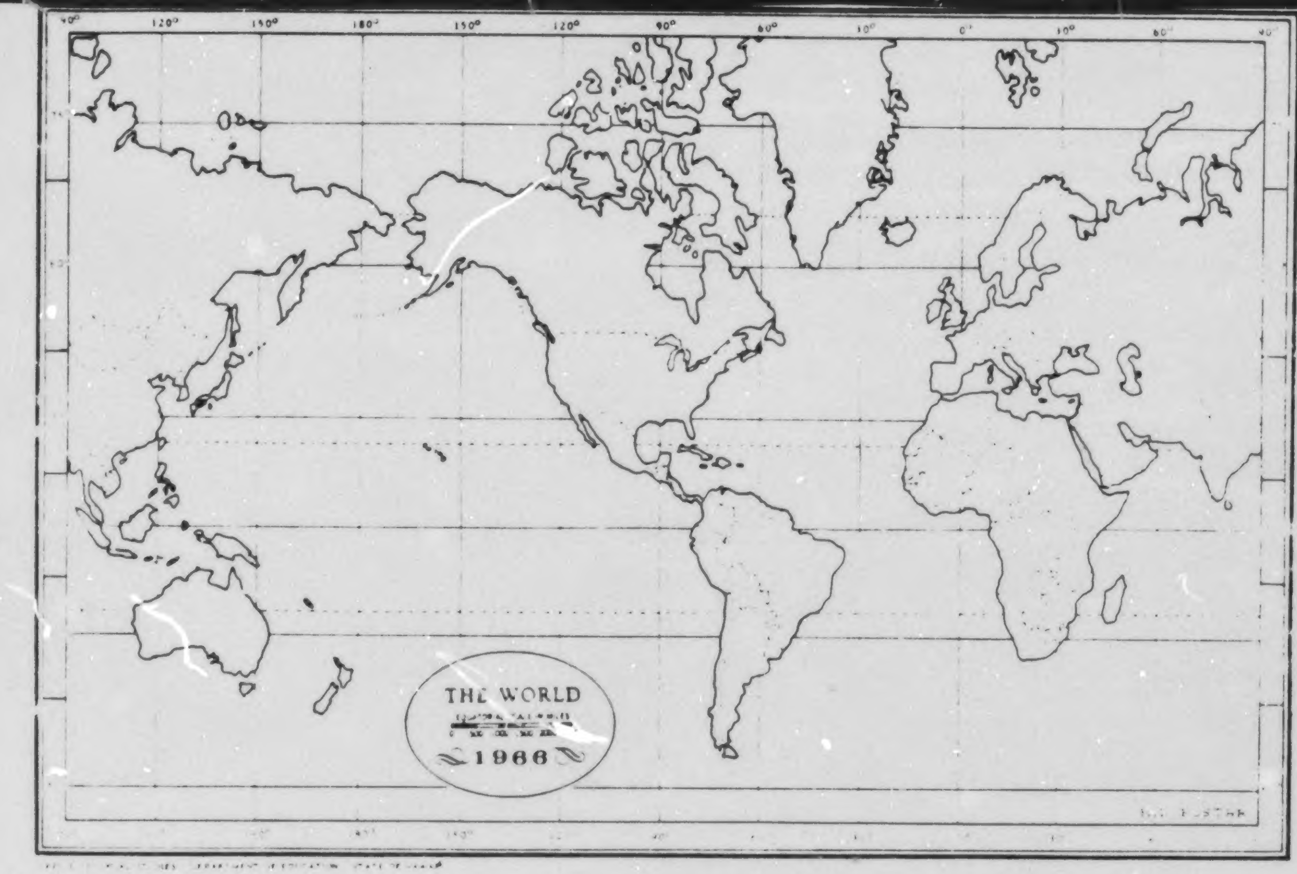
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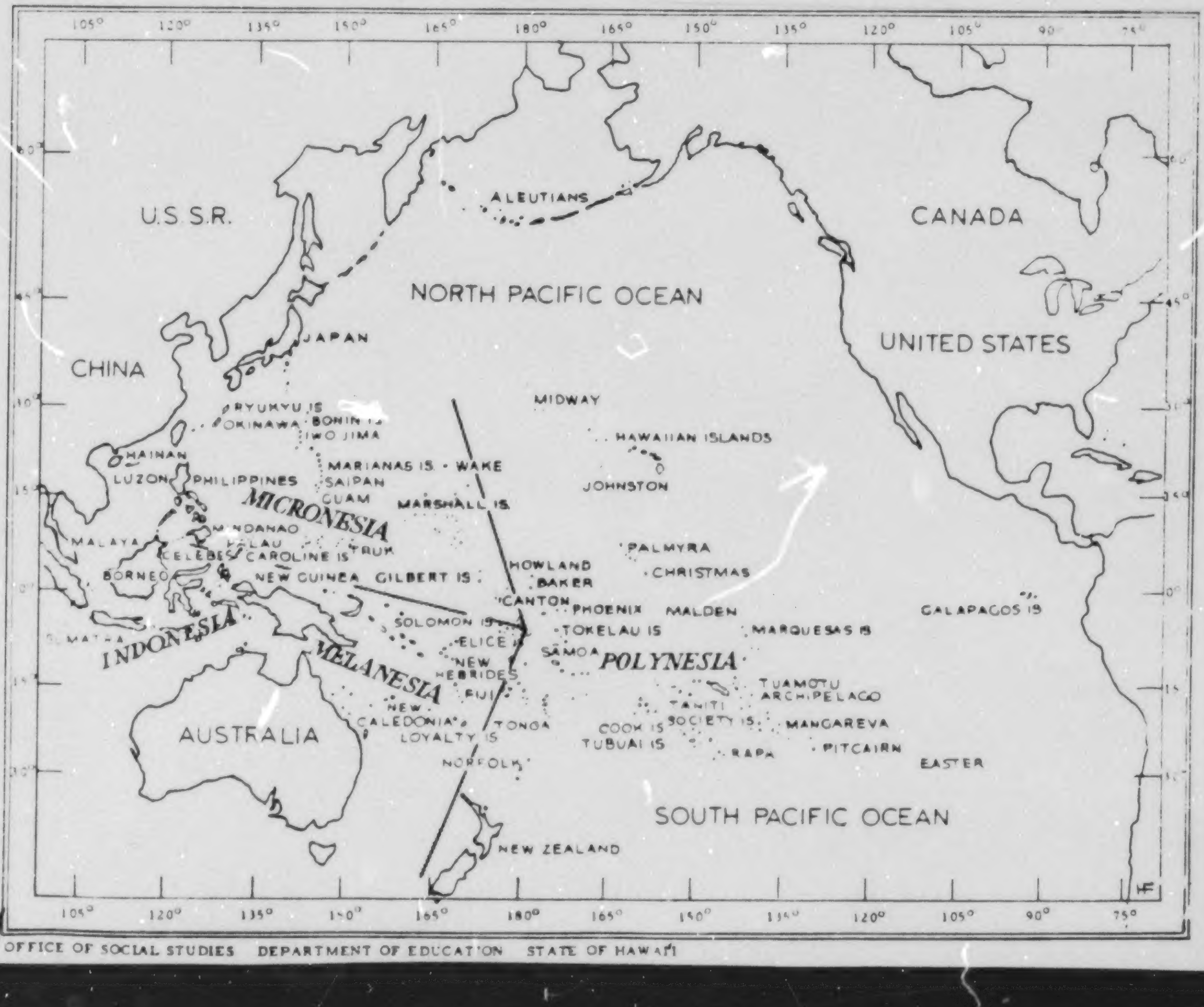
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ALEUTIANS
CANADA
NORTH PACIFIC OCEAN
CHINA
JAPAN
UNITED STATES
RYUKYU IS.
OKINAWA
BONIN IS.
IWO JIMA
MIDWAY
HAWAIIAN ISLANDS
HAINAN
MARIANAS IS.
WAKE
LUZON
PHILIPPINES
SAIPAN
GUAM
JOHNSTON
MICRONESIA
MARSHALL IS.
MALAYA
MINDANAO
PALAU
TRUK
PALMYRA
CELEBES
CAROLINE IS.
HOWLAND
CHRISTMAS
BORNEO
NEW GUINEA
GILBERT IS.
BAKER
CANTON
PHOENIX
MALDEN
GALAPAGOS IS.
SUMATRA
SOLOMON IS.
TOKELAU IS.
MARQUESAS IS.
INDONESIA
ELICE
SAMOA
POLYNESIA
MELANESIA
NEW HEBRIDES
TUAMOTU ARCHIPELAGO
FIJI
NEW CALEDONIA
TAHITI
SOCIETY IS.
MANGAREVA
LOYALTY IS.
TONGA
COOK IS.
AUSTRALIA
TUBUAI IS.
RAPA
PITCAIRN
EASTER
NORFOLK
SOUTH PACIFIC OCEAN
NEW ZEALAND

593/594

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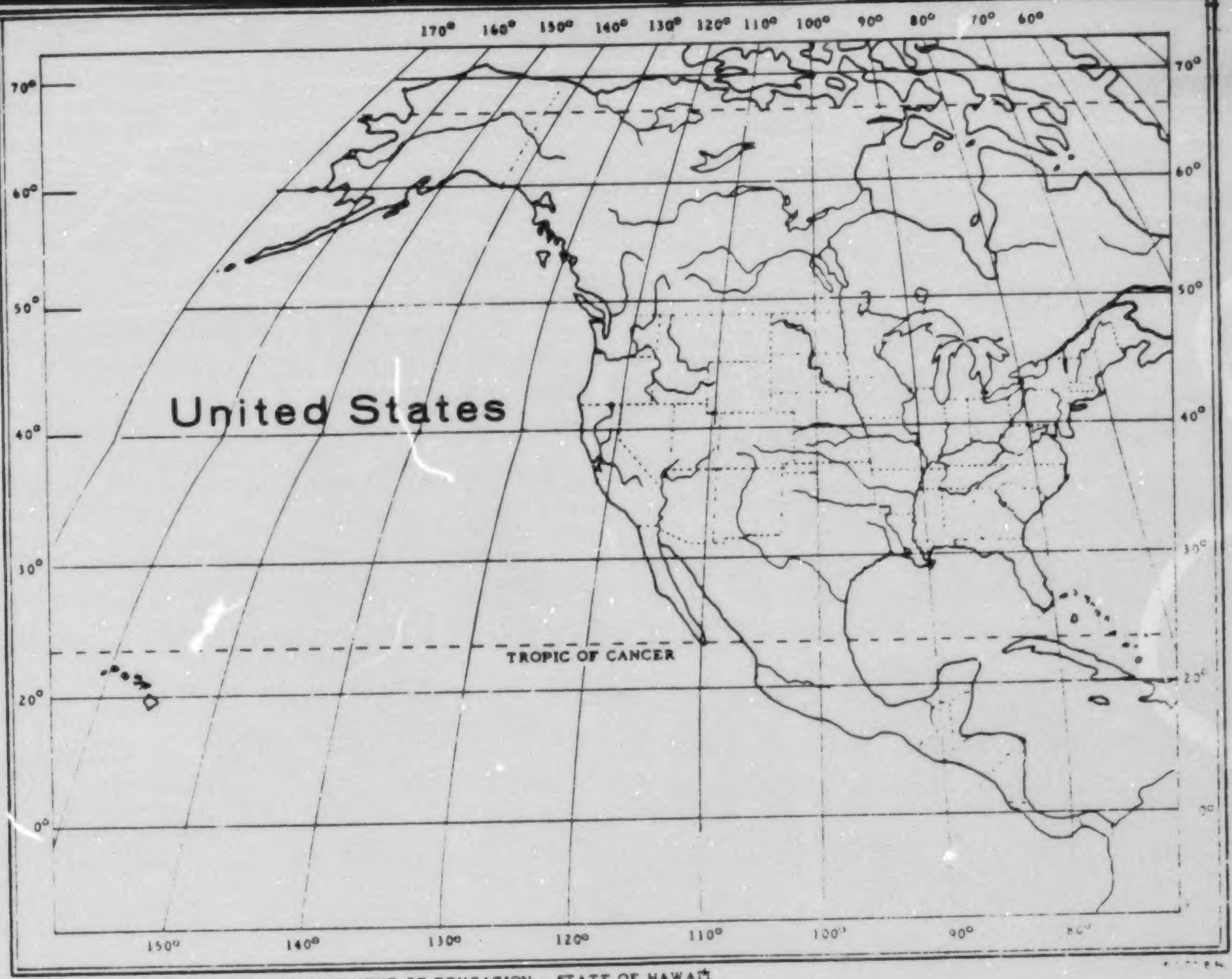
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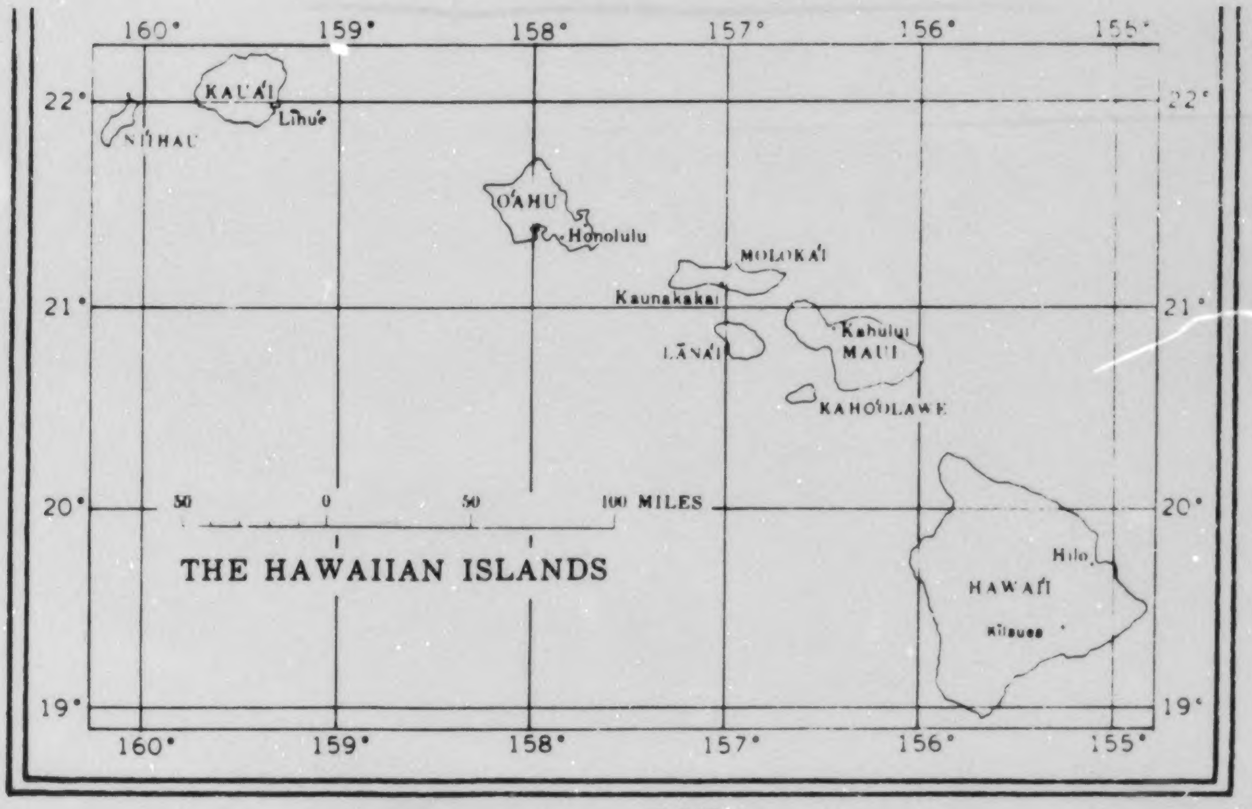
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157°
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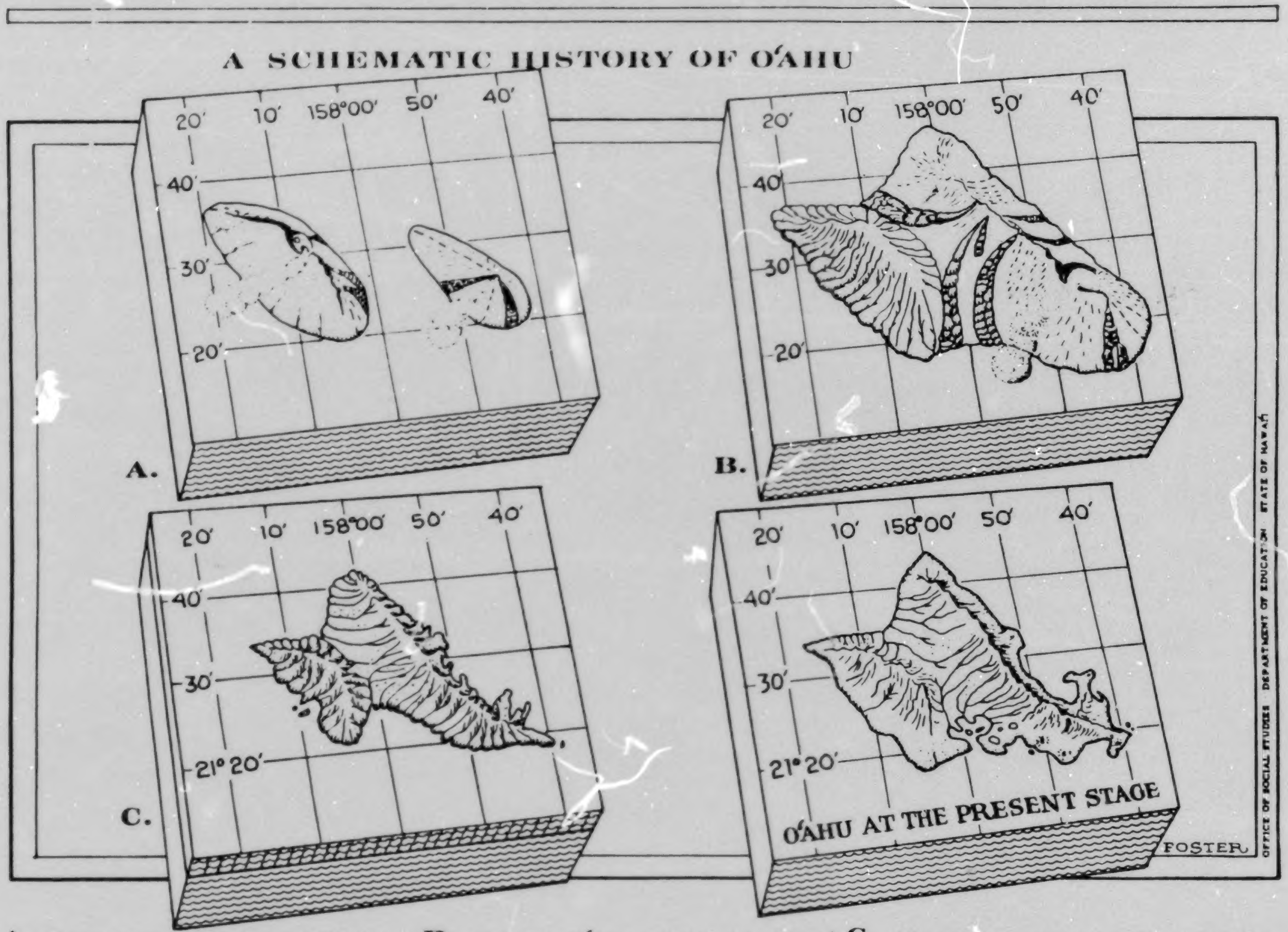
19°
KAUA'I
Lihu'e
NI'IHAU
O'AHU
Honolulu
MOLOKA'I
Kaunakakai
LĀNA'I
Kahului
MAUI
KAHO'OLAWE
Hilo
HAWAI'I
Kilauea
50
0
50
100 MILES

THE HAWAIIAN ISLANDS



A SCHEMATIC HISTORY OF OʻAHU

OFFICE OF SOCIAL STUDIES DEPARTMENT OF EDUCATION STATE OF HAWAIʻI

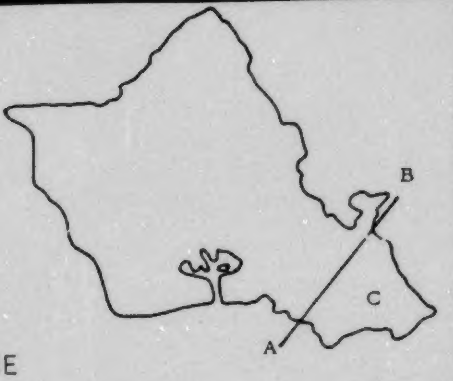
A. AT THIS STAGE THE LAVA FLOWING FROM THE WAIʻANAE VOLCANO (LEFT) IS CONFINED TO THE N. E. SLOPES BY A HIGH FAULT CLIFF. THE NEWLY FORMED KOʻOLAU VOLCANO (RT) BUILDS UP A LAVA DOME FROM ITS CENTRAL VENT

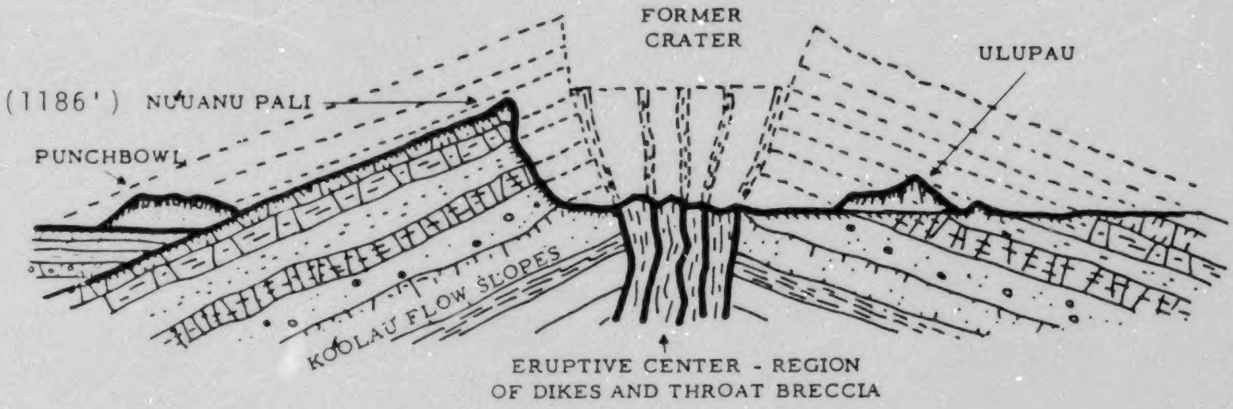
B. HERE THE WAIʻANAE CALDERA IS INACTIVE AND FILLED WITH LAVA AND THE SLOPES ARE DEEPLY ERODED. THE KOʻOLAU VOLCANO CONTINUES TO ERUPT AND THE FLOW JOINS WITH THE WAIʻANAE RANGE TO FORM A SINGLE ISLAND.

C. NOW BOTH RANGES ARE ERODED AND PARTIALLY SUBMERGED. FOSSILEFEROUS MARINE SEDIMENTS INDICATE A SUBMERGENCE OF OVER 1200 FEET. THE SHORE LINE IN THIS ILLUSTRATION IS 250 FEET ABOVE THE LEVEL OF THE SEA TODAY. SECONDARY ERUPTIONS WILL CONTINUE AS THE ISLAND REEMERGES.

CROSS SECTION OF O'AHU/MOKOLI'I ISLAND

THE ILLUSTRATION BELOW SHOWS A CROSS SECTION OF O'AHU ALONG LINE A-B AS VIEWED FROM POINT C. NOTE THAT THE HIGHEST POINT OF THE KO'OLAU RANGE AT KŌNĀHUANUI (3105') HAS BEEN REDUCED BY EROSION APPROXIMATELY 1000 FEET FROM ITS FORMER ELEVATION AND THE CREST IS .5 TO 1 MILE LEEWARD OF THE FORMER CREST LINE OF THE KO'OLAU VOLCANO.

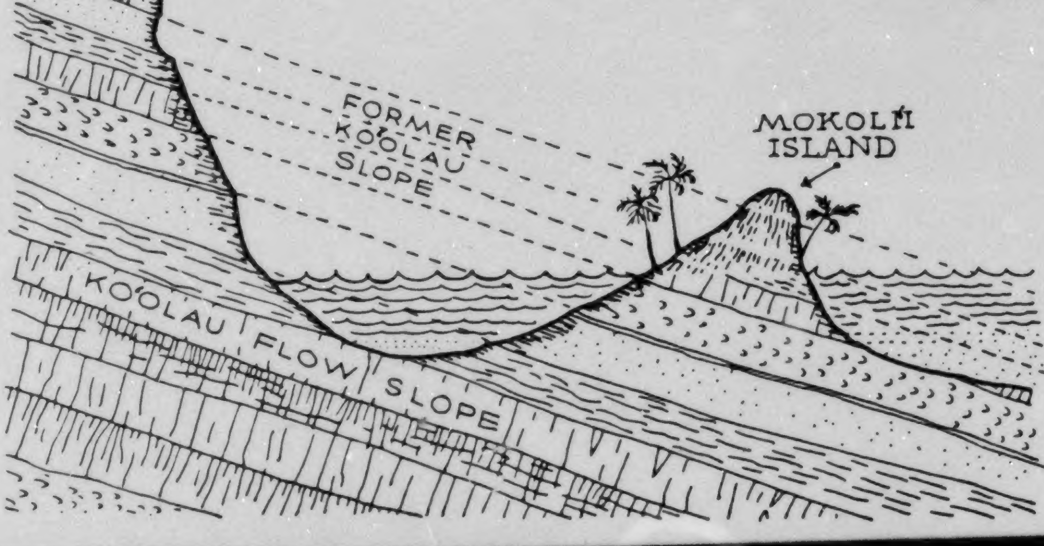



FORMER CRATER
ULUPAU
(1186') NUUANU PALI
PUNCHBOWL
KOOLAU FLOW SLOPES
ERUPTIVE CENTER - REGION OF DIKES AND THROAT BRECCIA

After : W. KYSELKA

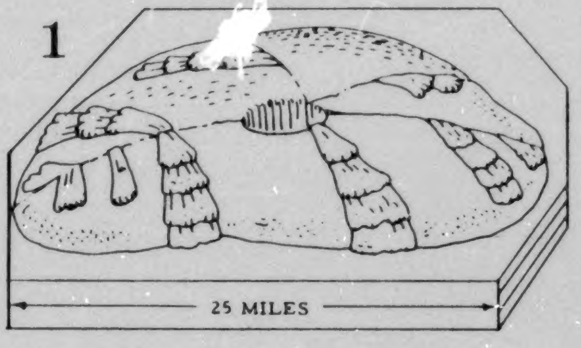
MOKOLI'I ISLAND ("CHINAMAN'S HAT") IS A SEA STACK. IT LOOKS LIKE A SMALL CONE BUT IT IS ACTUALLY PART OF THE KO'OLAU VOLCANO ISOLATED BY THE ACTION OF THE SEA.

MOKOLI'I ISLAND


FORMER KO'OLAU SLOPE
MOKOLI'I ISLAND
KO'OLAU FLOW SLOPE

Effects of EROSION

1



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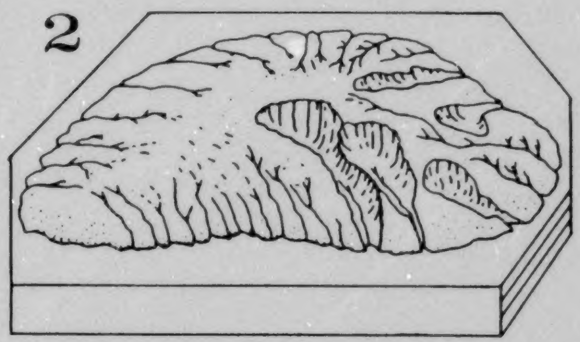

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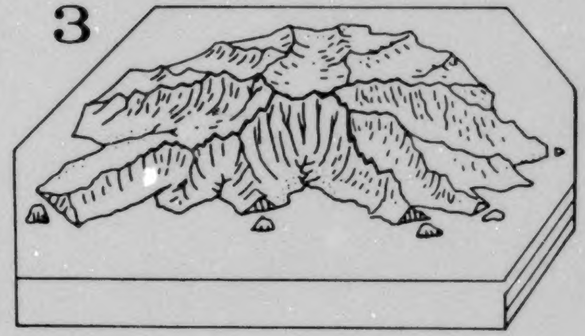

THE HAWAIIAN LAVA OR SHIELD VOLCANO

STAGE 1 SHOWS 4° OR 5° GENTLE SLOPE. OFTEN FLAT NEAR TOP.

RANGE UP TO OVER 13,000 FEET ABOVE SEA LEVEL.

IN WIDTH (AT SEA LEVEL) 10-50 MILES, AT SUBMERGED BASE: UP TO 100 MILES.

CENTRAL DEPRESSION AND LAVA FLOWING FROM RADIAL FISSURE LINES.

2. YOUNG STAGE - DEVELOPMENT OF AMPHITHEATRE-HEADED VALLEYS.

3. MATURE STAGE - RESULTS OF GREAT STREAM EROSION.

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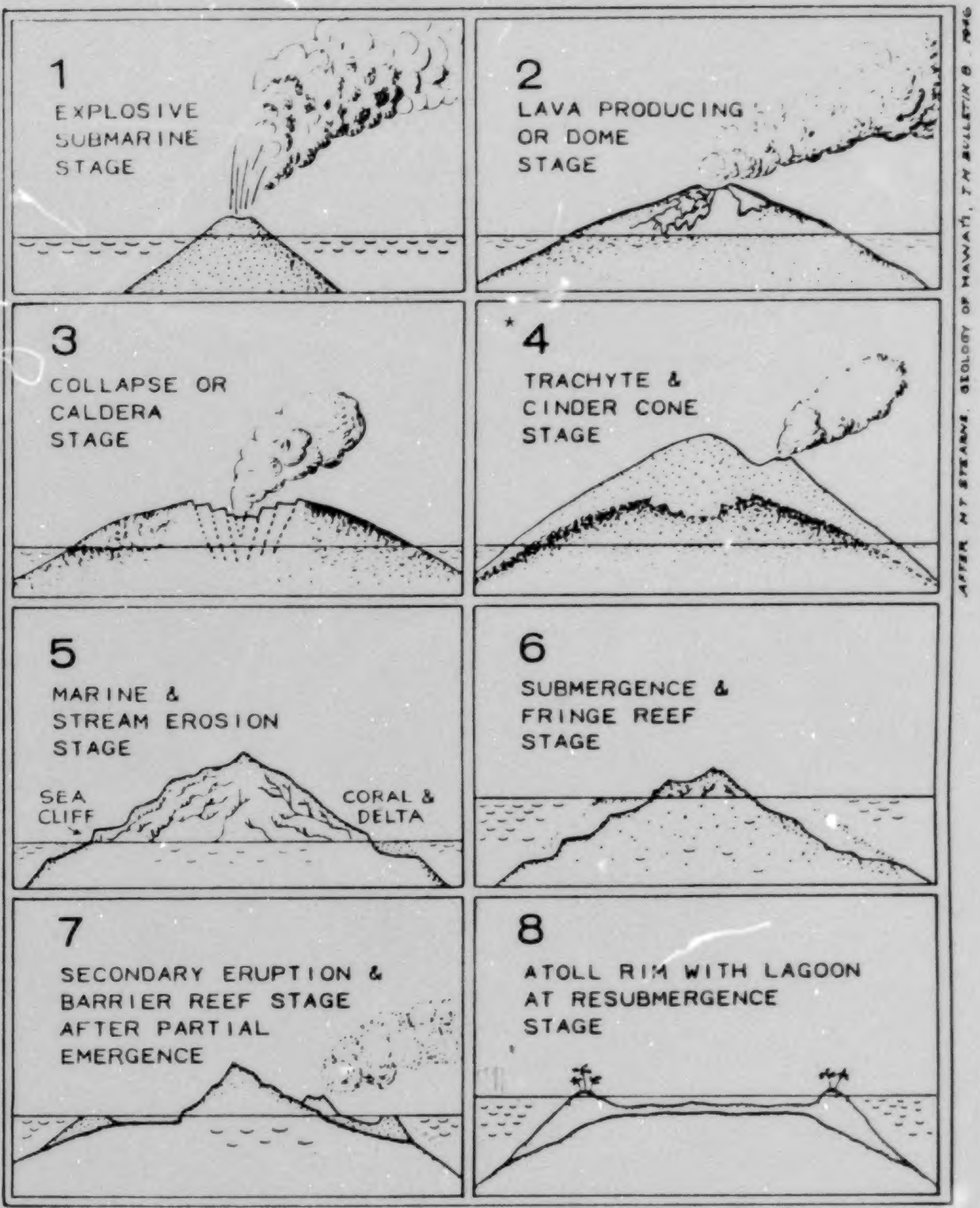

1
EXPLOSIVE SUBMARINE STAGE
2
LAVA PRODUCING OR DOME STAGE
3
COLLAPSE OR CALDERA STAGE
*4
TRACHYTE & CINDER CONE STAGE
5
MARINE & STREAM EROSION STAGE
SEA CLIFF
CORAL & DELTA
6
SUBMERGENCE & FRINGE REEF STAGE
7
SECONDARY ERUPTION & BARRIER REEF STAGE AFTER PARTIAL EMERGENCE
8
ATOLL RIM WITH LAGOON AT RESUBMERGENCE STAGE

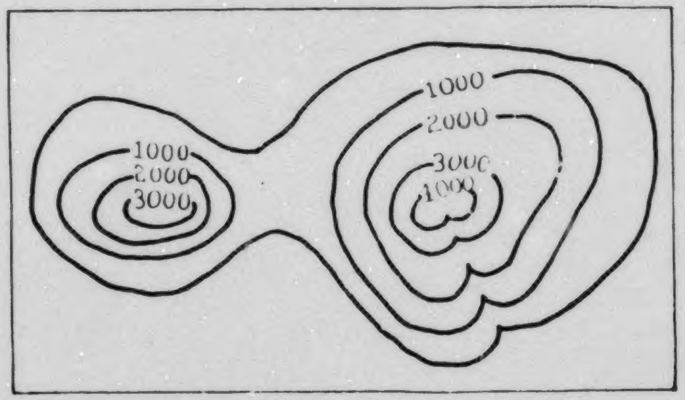
AFTER H T STEARNS, GEOLOGY OF HAWAII, T H BULLETIN 8, 1946

A GEOLOGIC HISTORY OF A VOLCANIC ISLAND IN THE PACIFIC

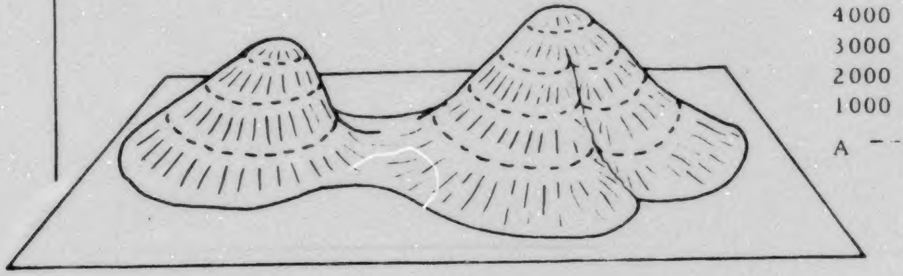
*Stage 4 did not occur in the Ko'olau Range.

CONTOURS

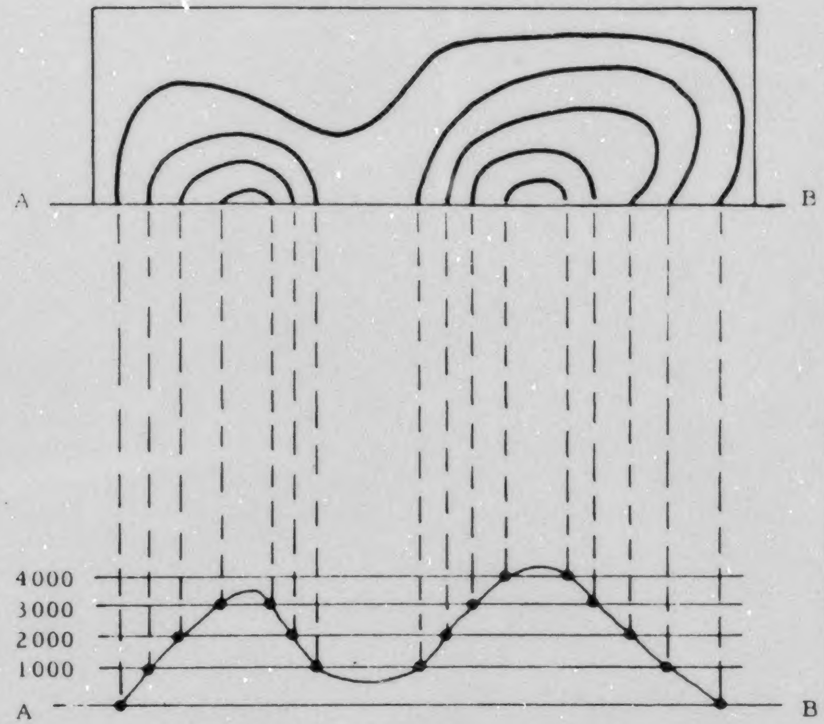
A CONTOUR LINE IS AN IMAGINARY LINE RUNNING ON THE GROUND AT THE SAME ALTITUDE OR ELEVATION ABOVE SEA LEVEL.


1000
2000
3000
1000
2000
3000
1000

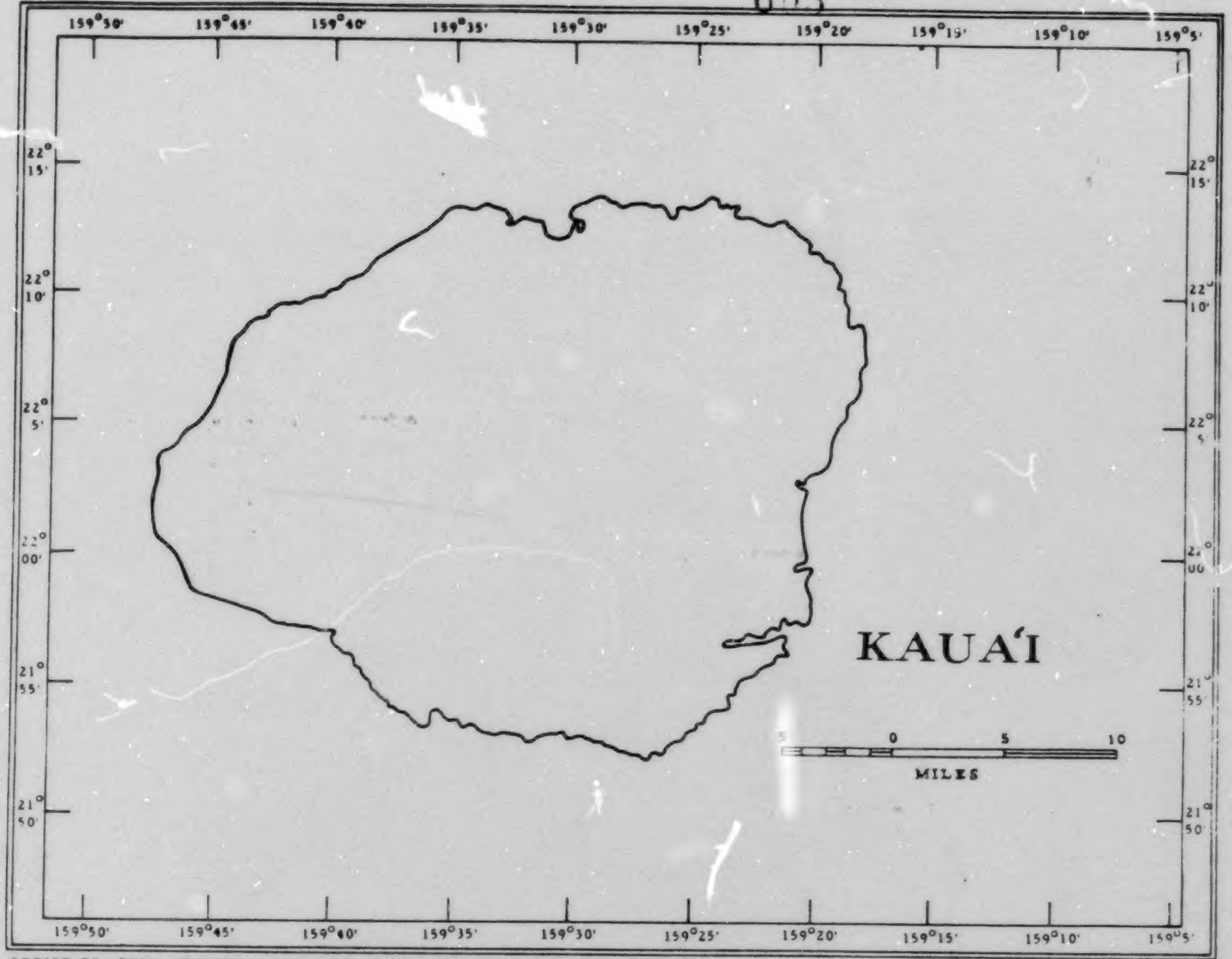
CLOSE CROWDING OF CONTOUR LINE: STEEP SLOPE. WIDELY SPACED LINES: GENTLE SLOPE.



CONTOUR INTERVAL: VERTICAL DISTANCE SEPARATING CONTOURS.


A
B
4000
3000
2000
1000
A
B

A PROFILE IS A SIDE VIEW OF A PORTION OF THE EARTH'S SURFACE.


KAUA'I
5
0
5
10
MILES
159°50'
159°45'
159°40'
159°35'
159°30'
159°25'
159°20'
159°15'
159°10'
159°5'
22° 15'
22° 10'
22° 5'
22° 00'
21° 55'
21° 50'

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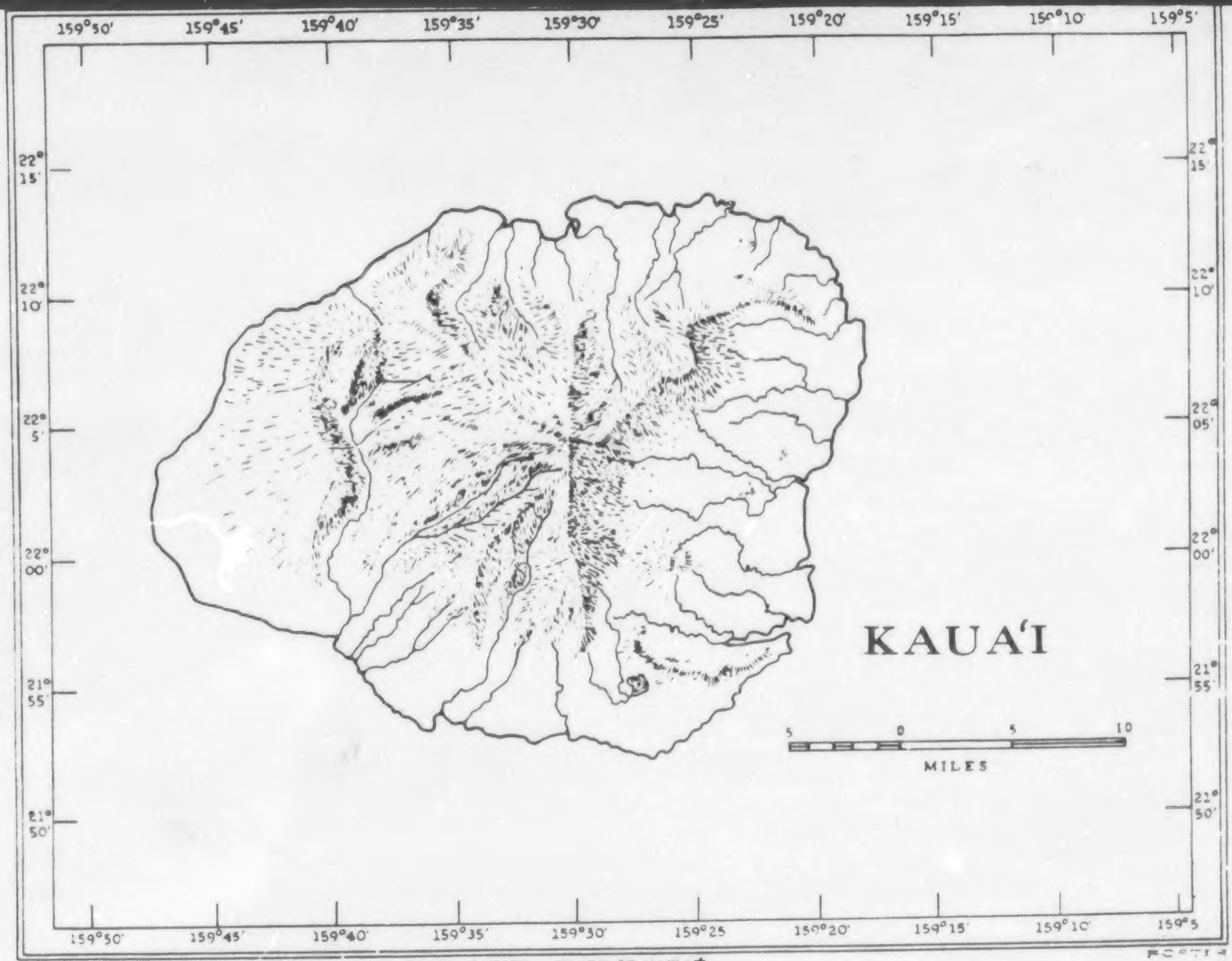
159°50'
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159°15'
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22° 10'
22° 5'
22° 00'
21° 55'
21° 50'
22° 05'
KAUA'I
5
0
5
10
MILES

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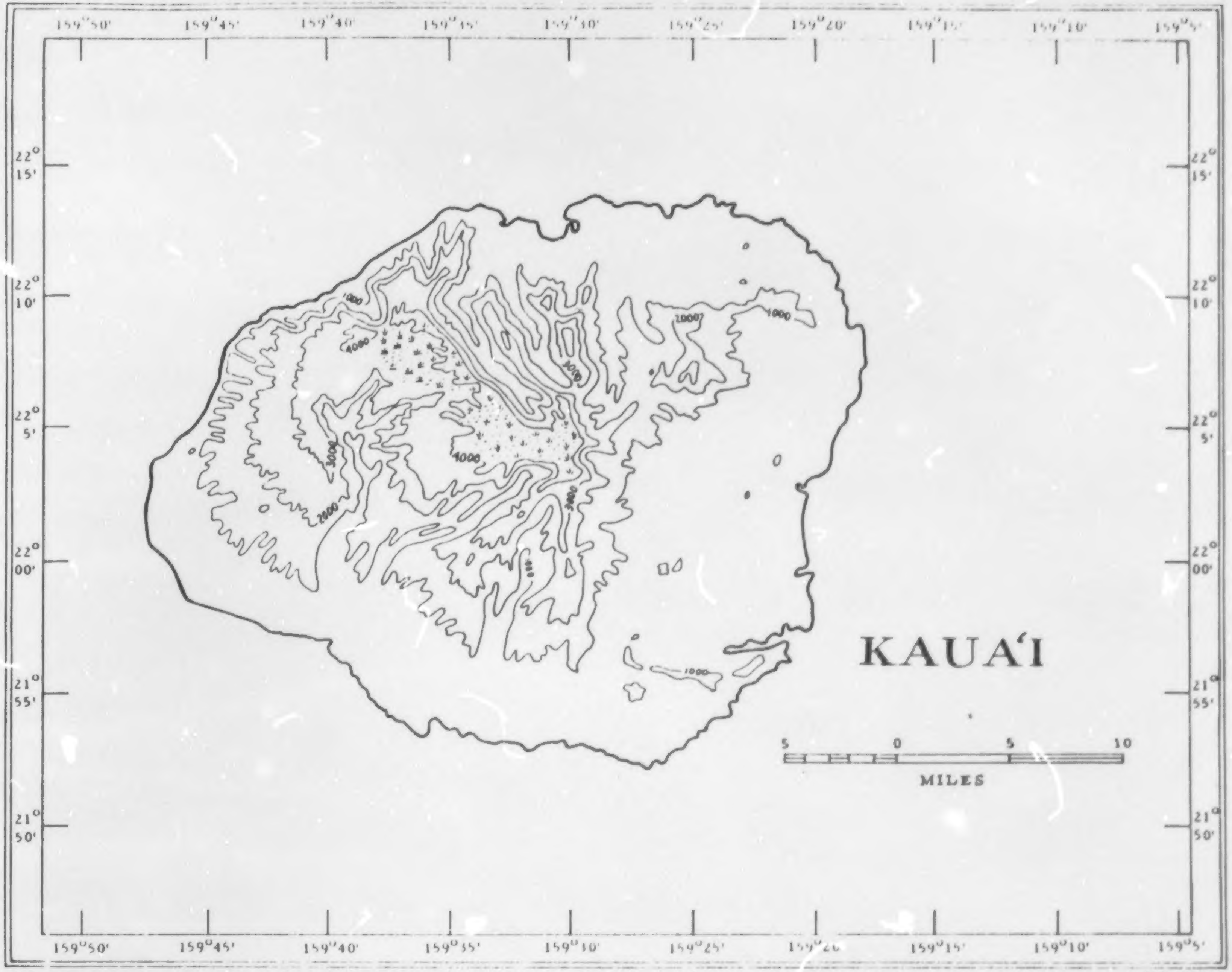
KAUA'I
159°50'
159°45'
159°40'
159°35'
159°30'
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159°20'
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21° 50'
1000
2000
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5 0 5 10
MILES

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POSTER

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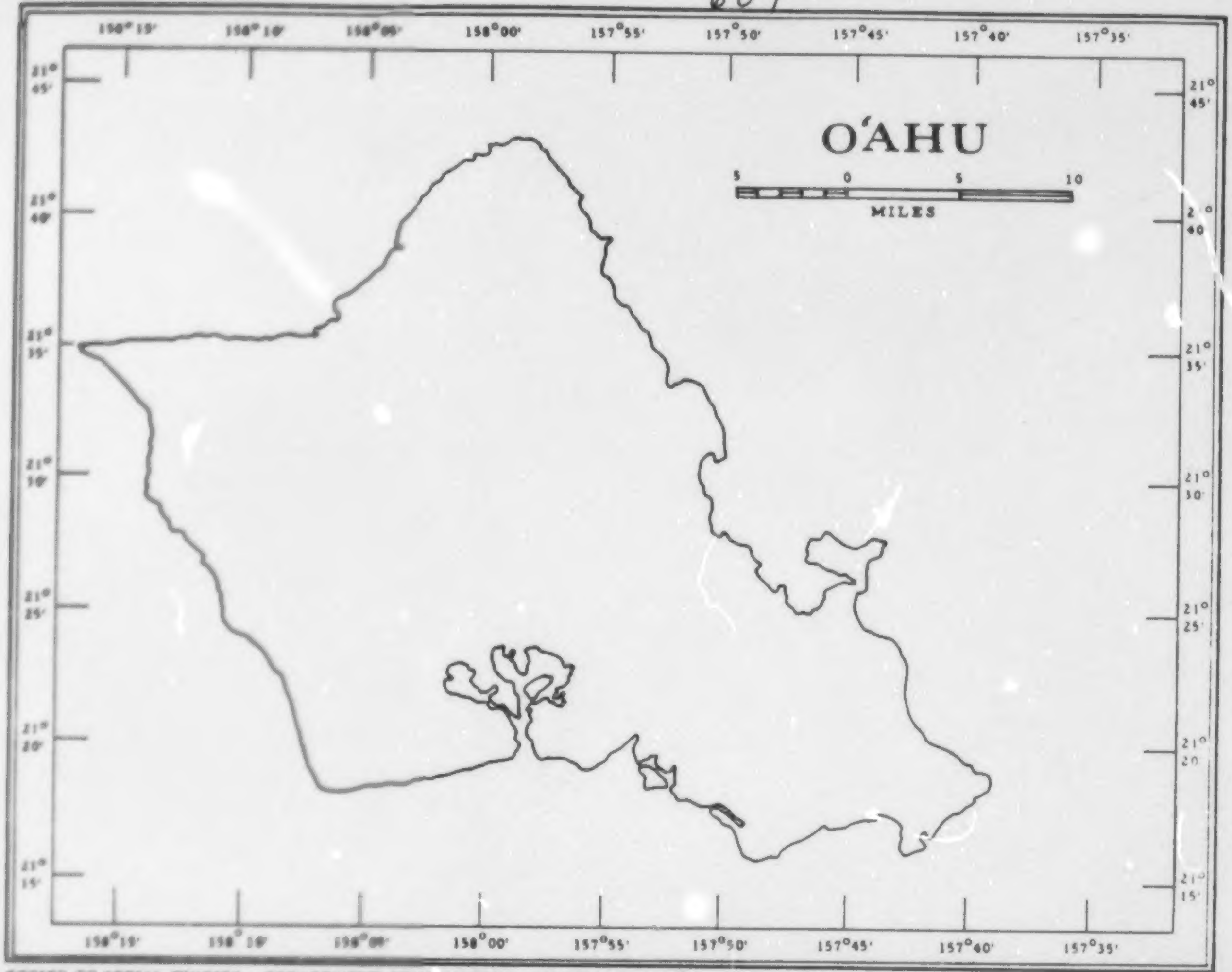
O'AHU
5
0
5
10
MILES
158°15'
158°10'
158°05'
158°00'
157°55'
157°50'
157°45'
157°40'
157°35'
21° 45'
21° 40'
21° 35'
21° 30'
21° 25'
21° 20'
21° 15'

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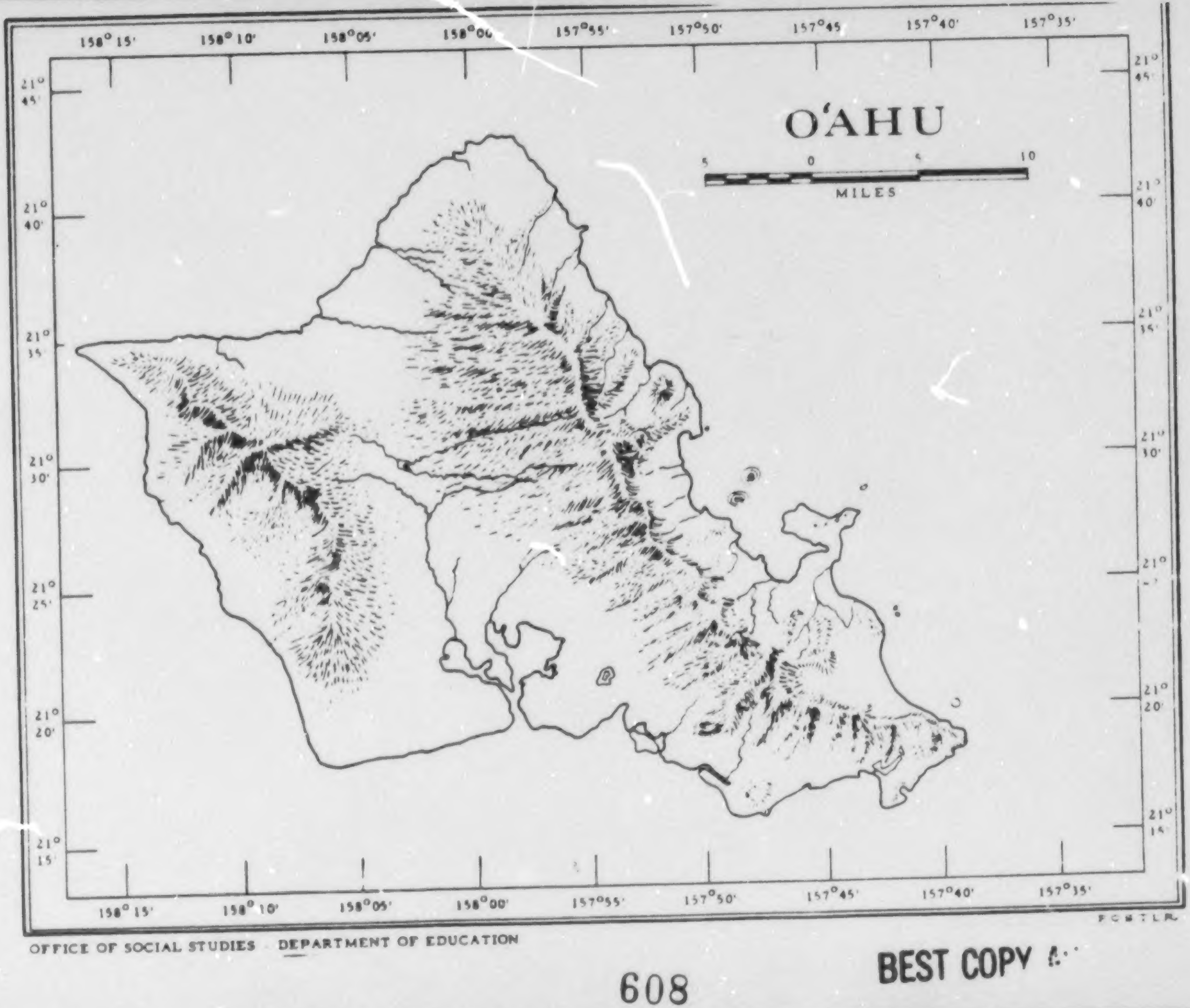
O'AHU
5
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MILES
158° 15'
158° 10'
158° 05'
158° 00'
157° 55'
157° 50'
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157° 40'
157° 35'
21° 45'
21° 40'
21° 35'
21° 30'
21° 25'
21° 20'
21° 15'
FOSTER

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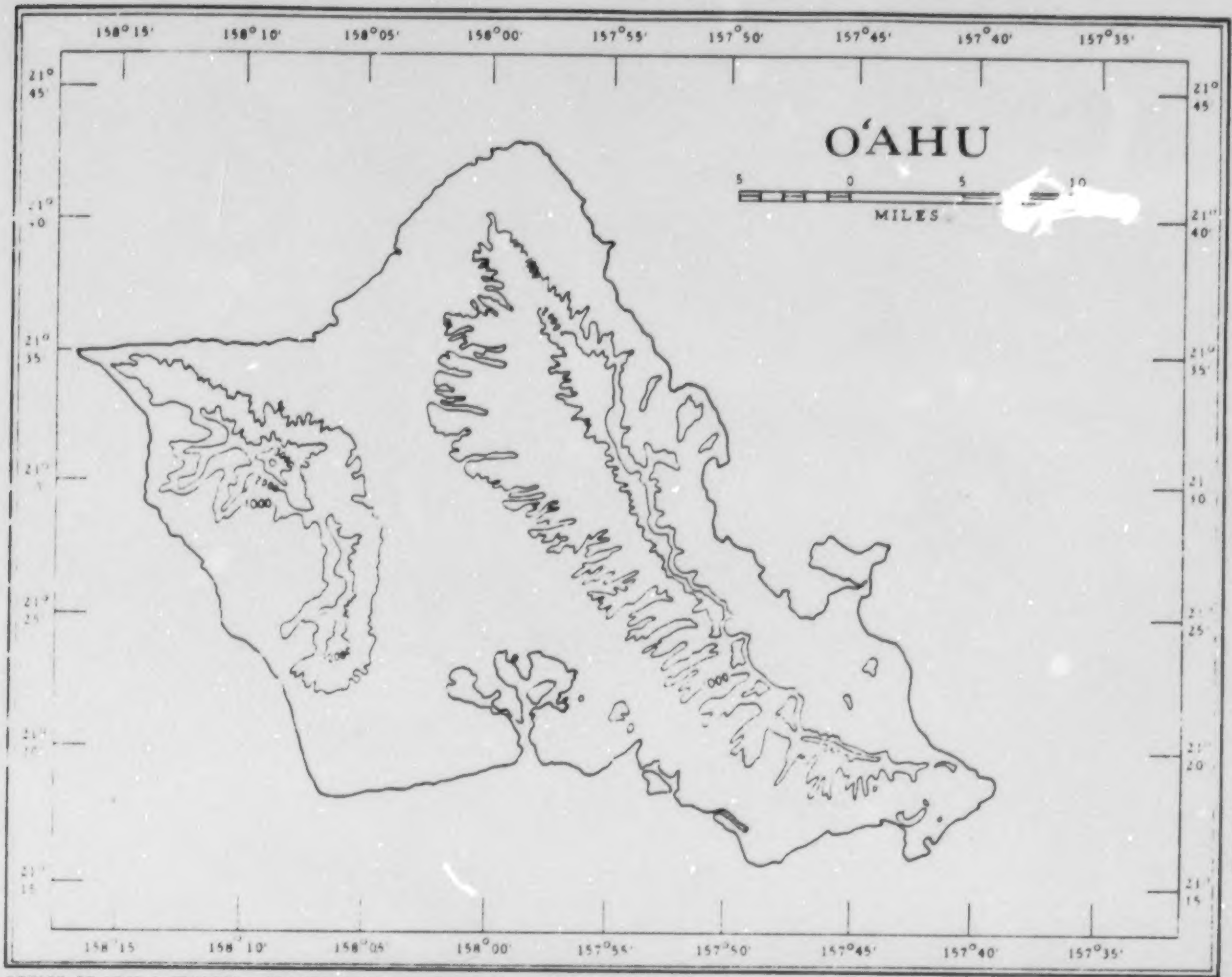
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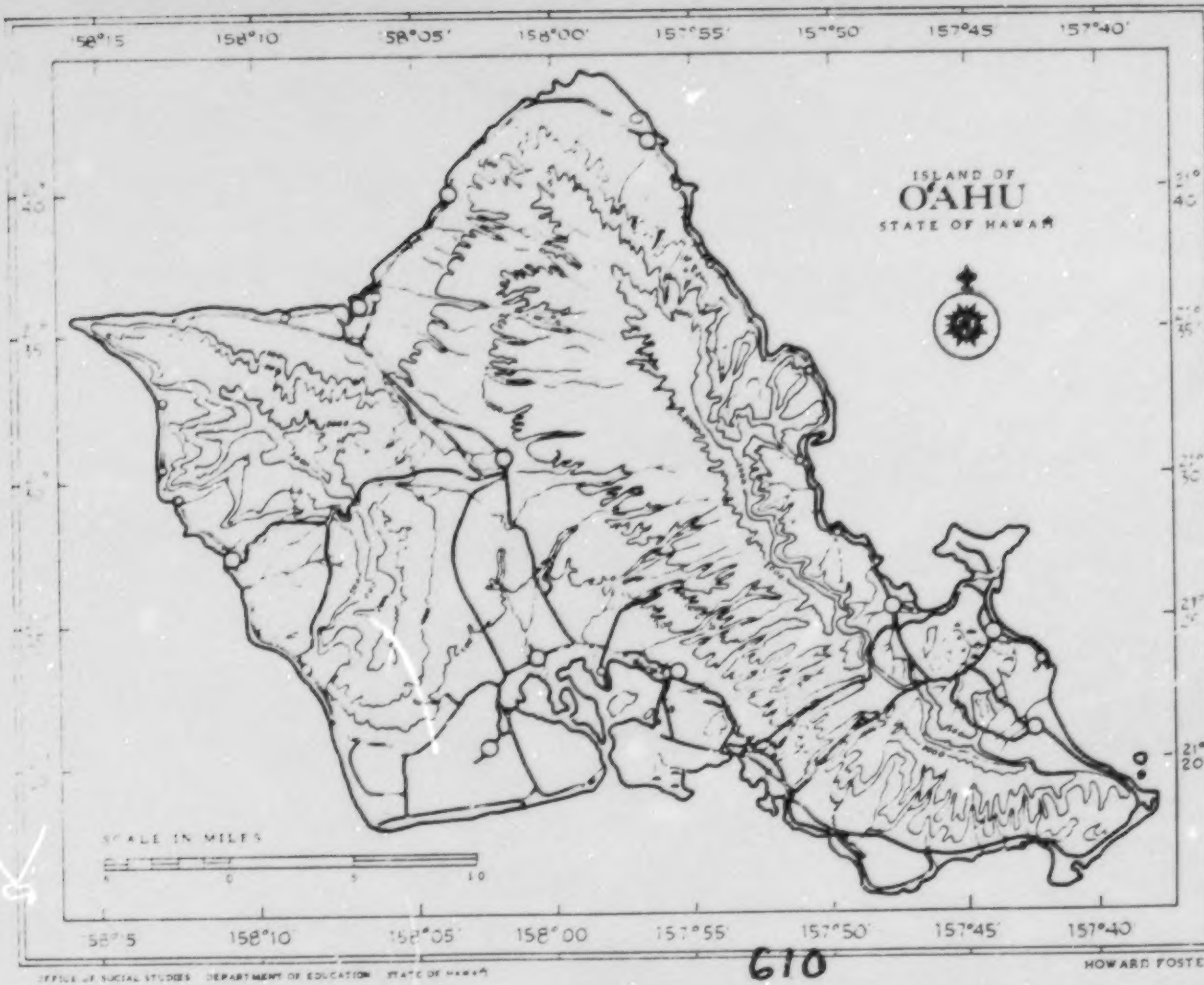
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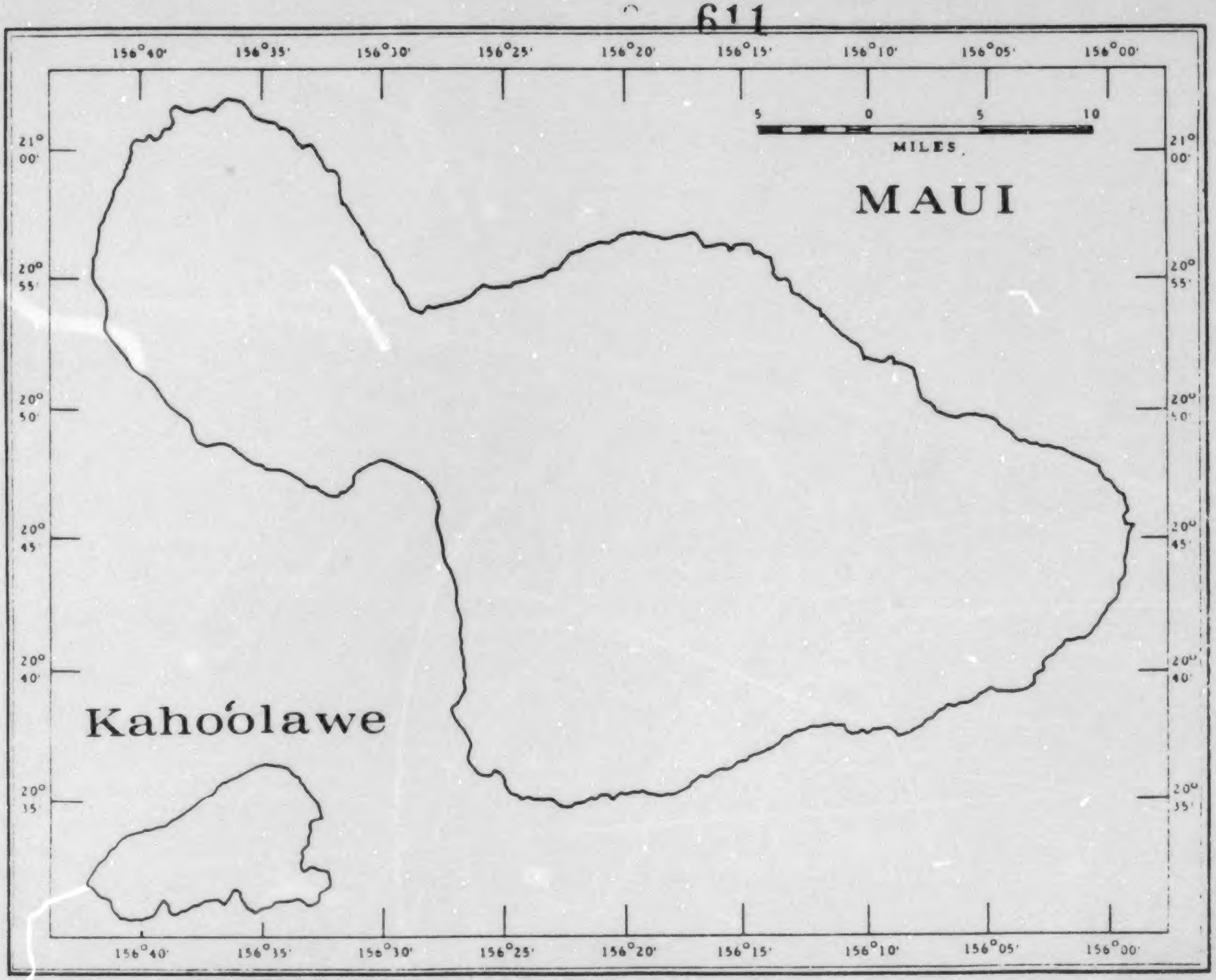
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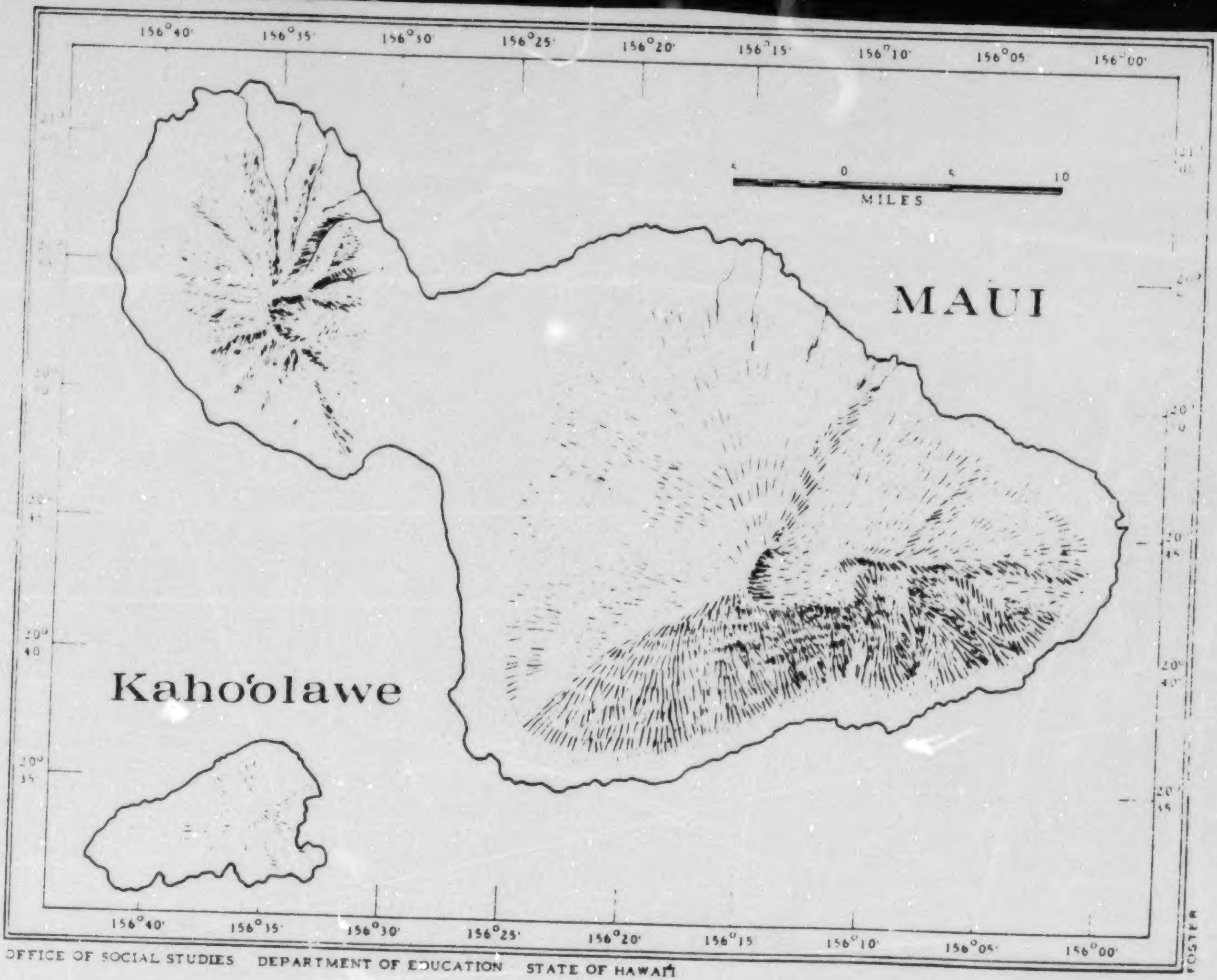
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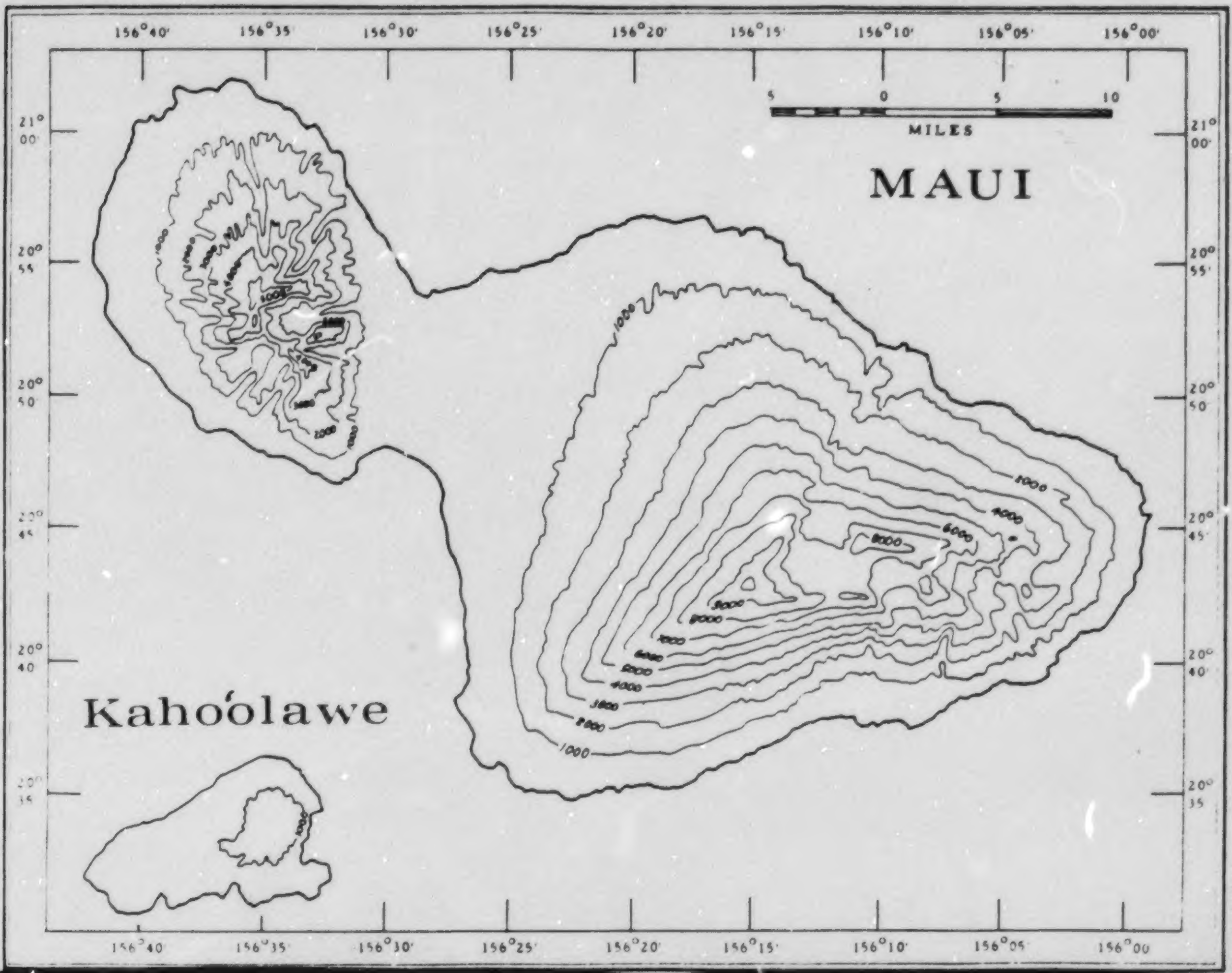
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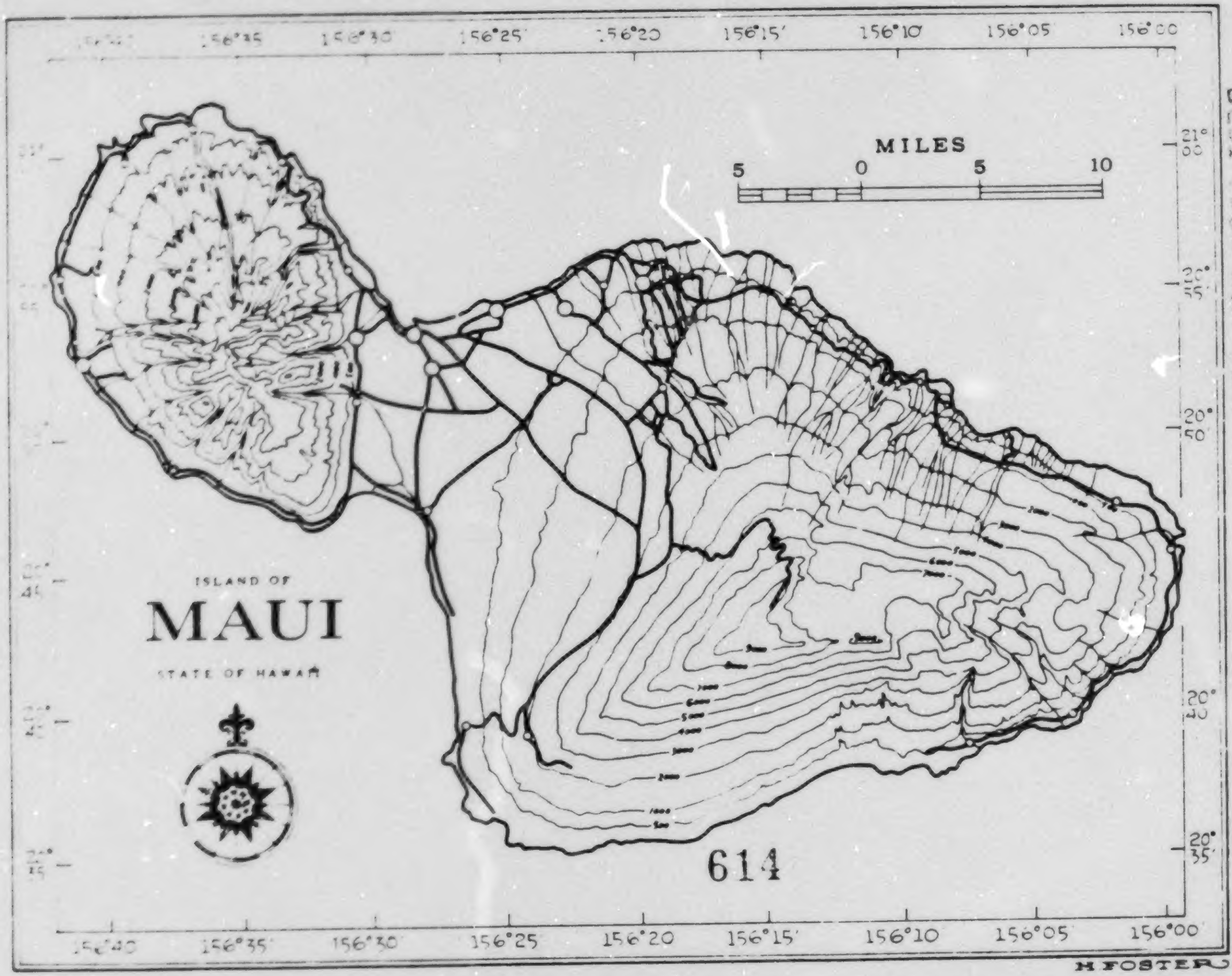
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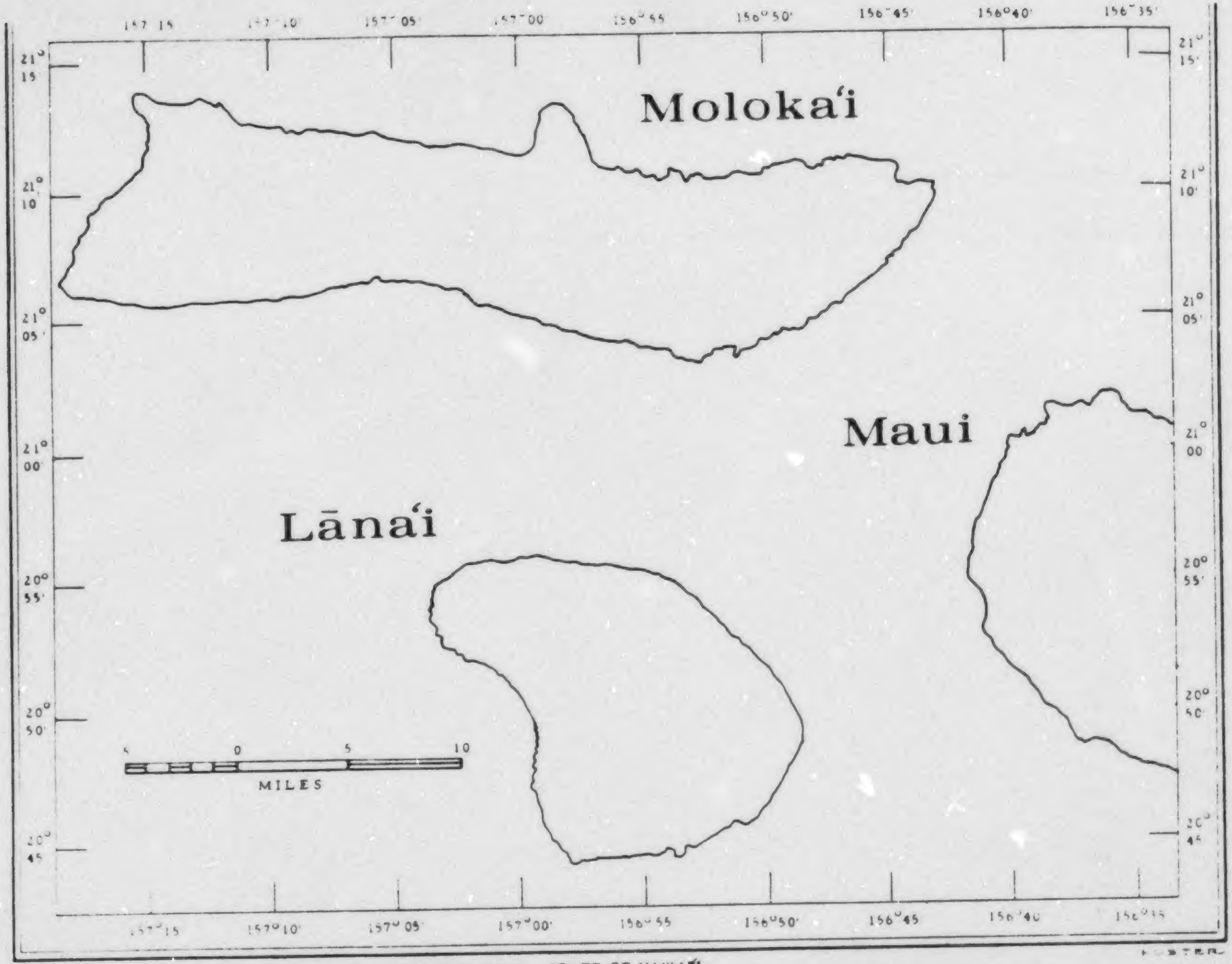
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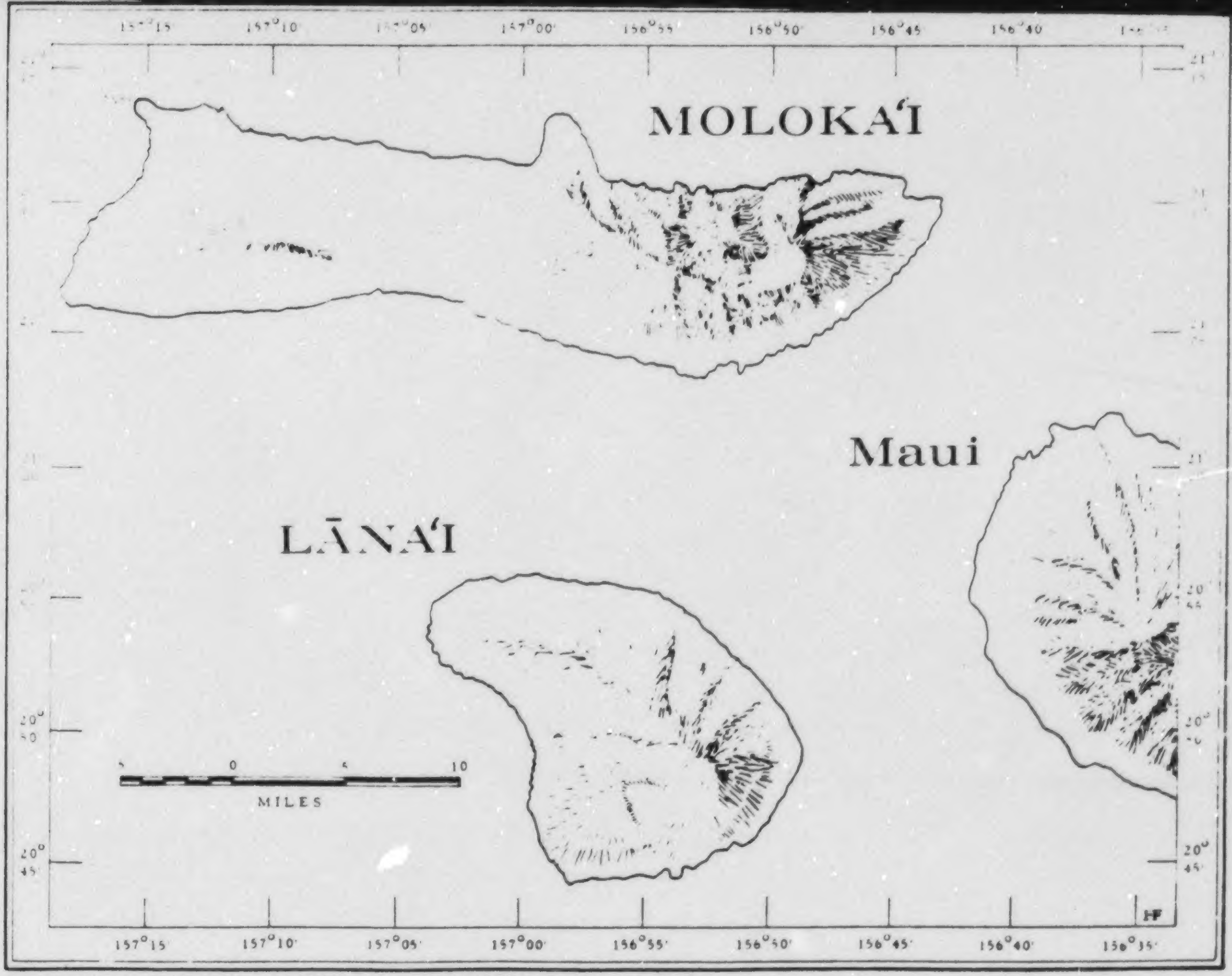
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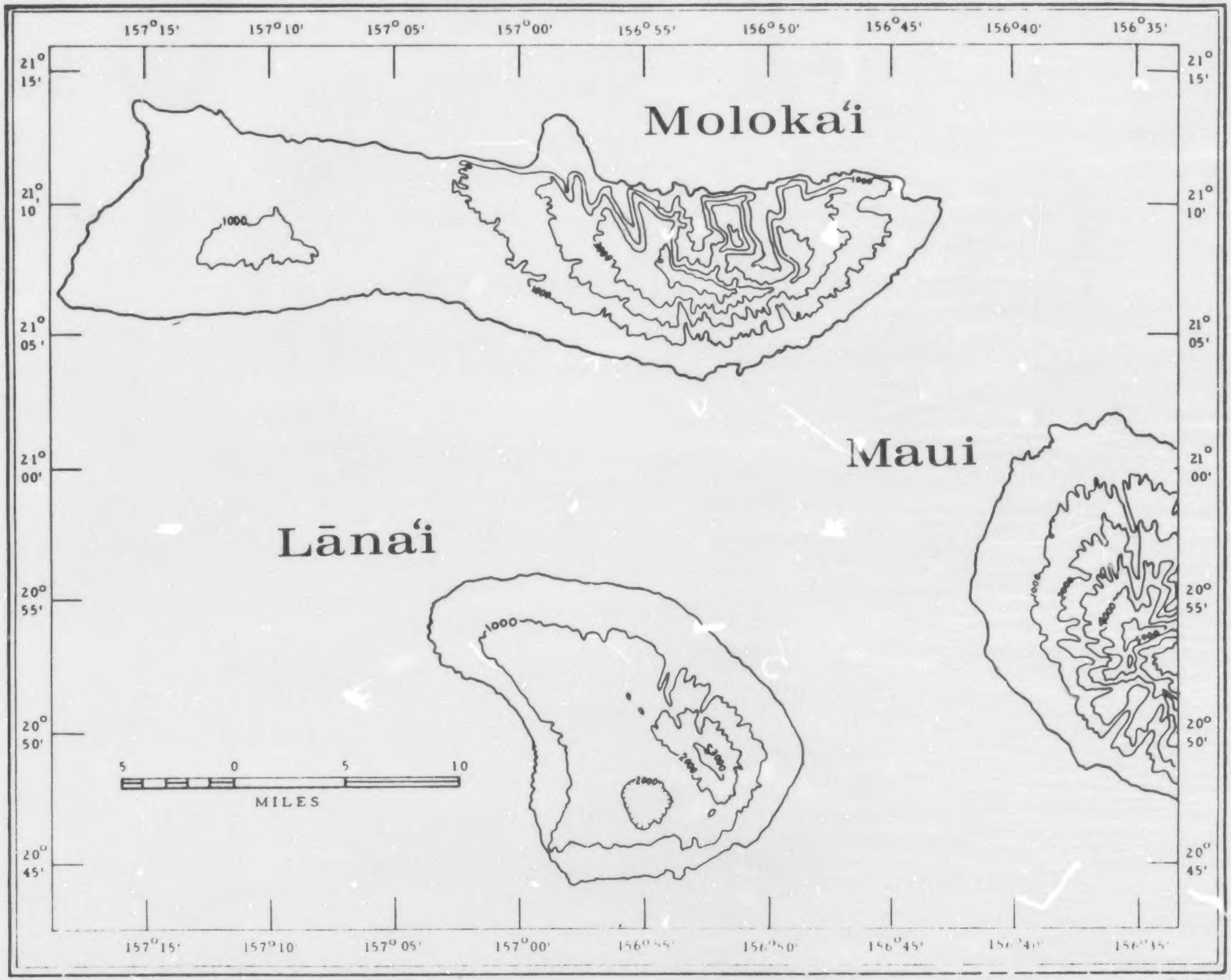
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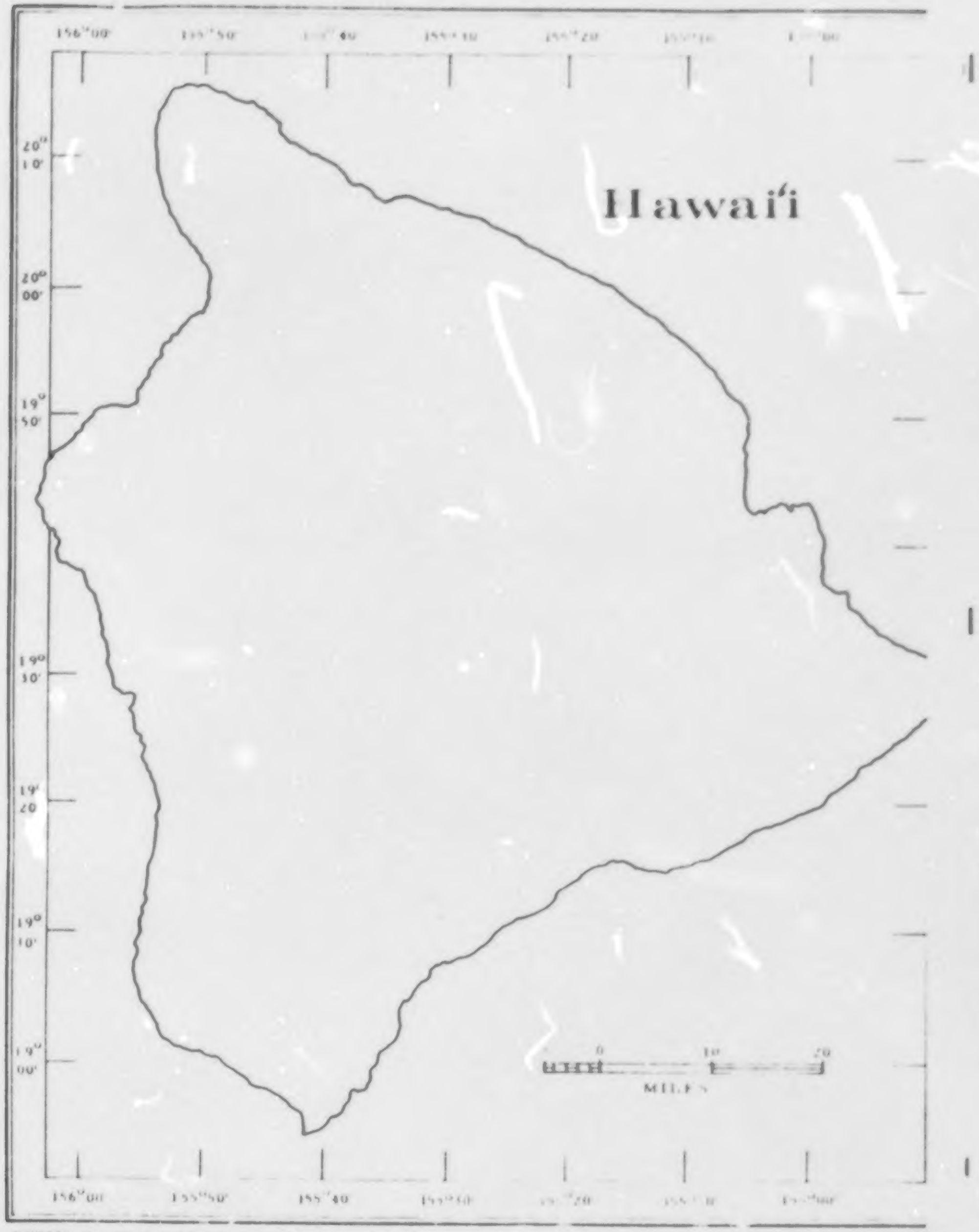
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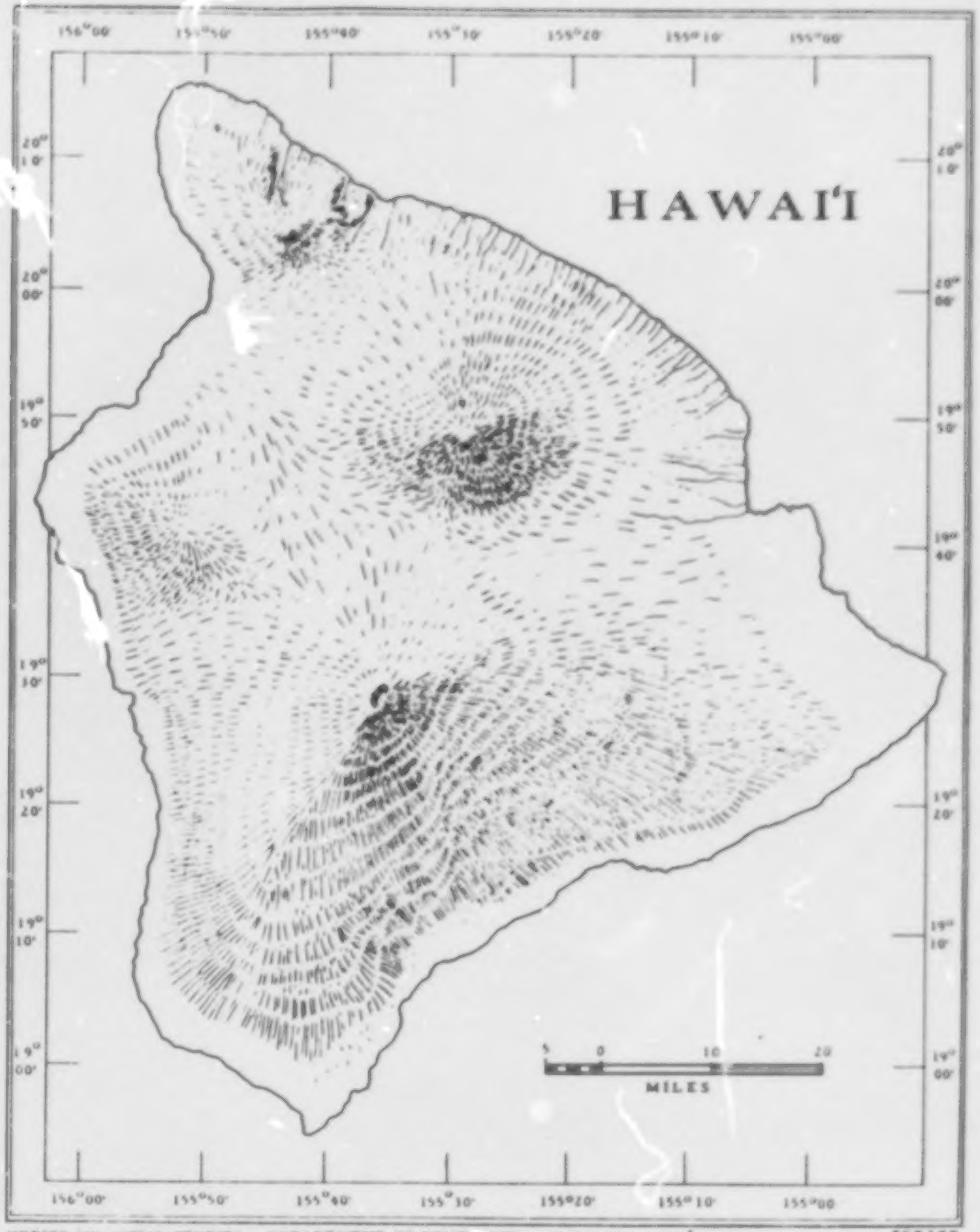
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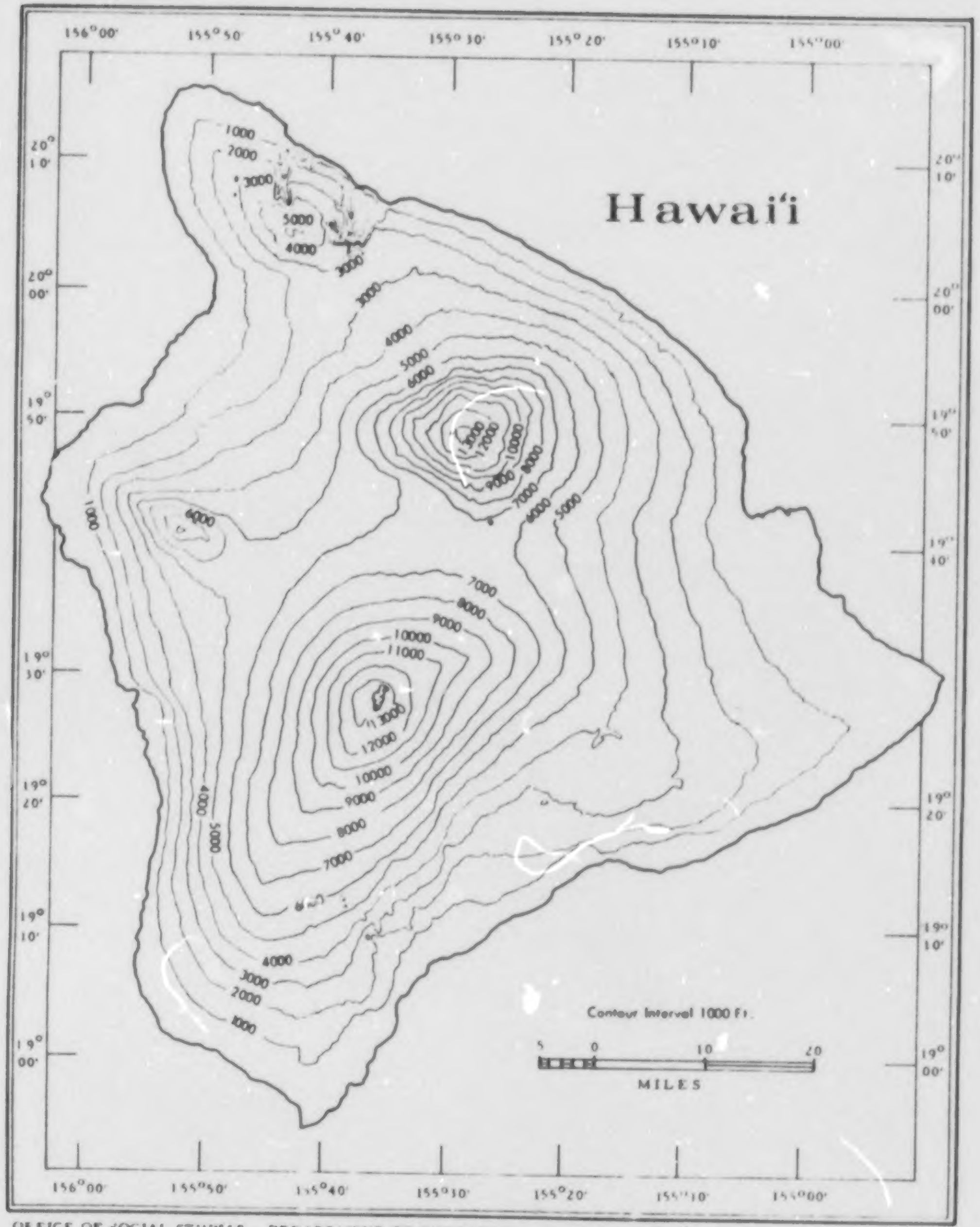
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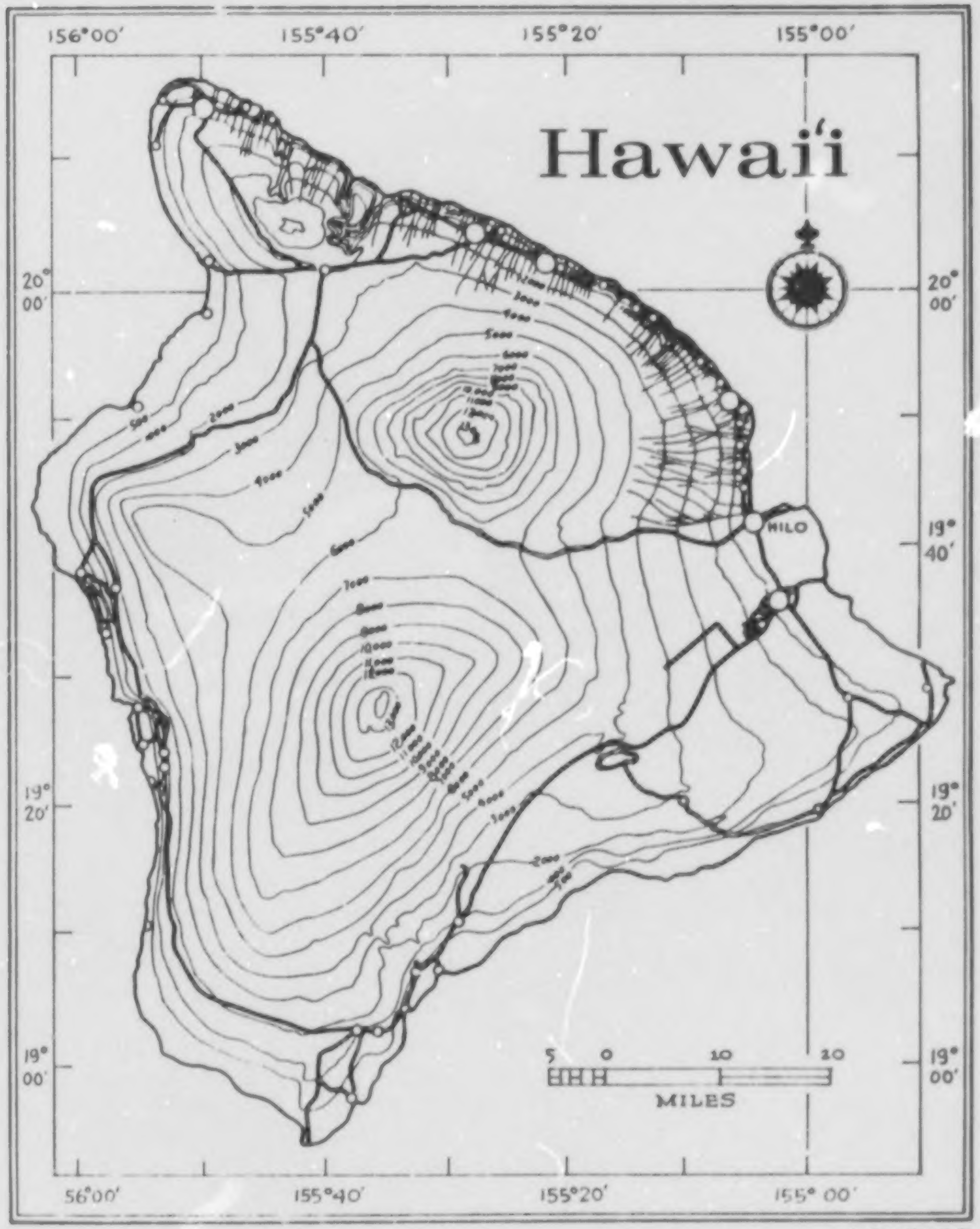
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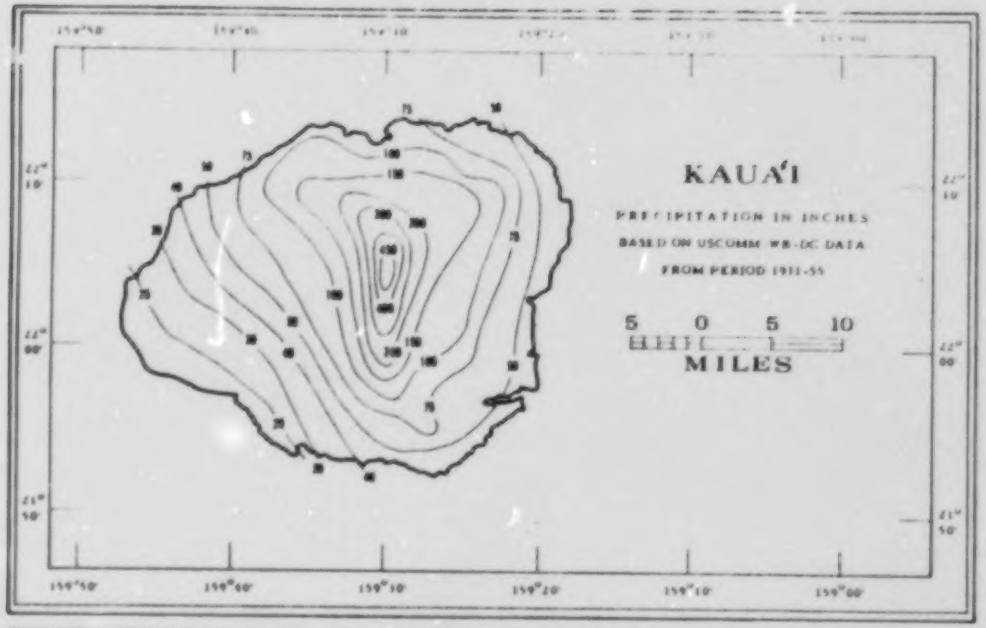

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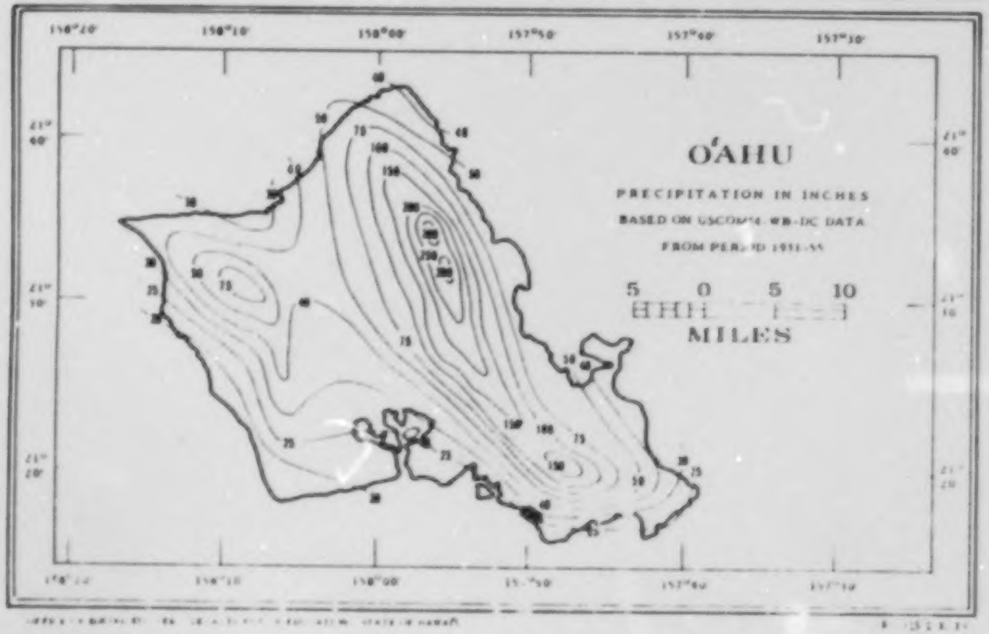

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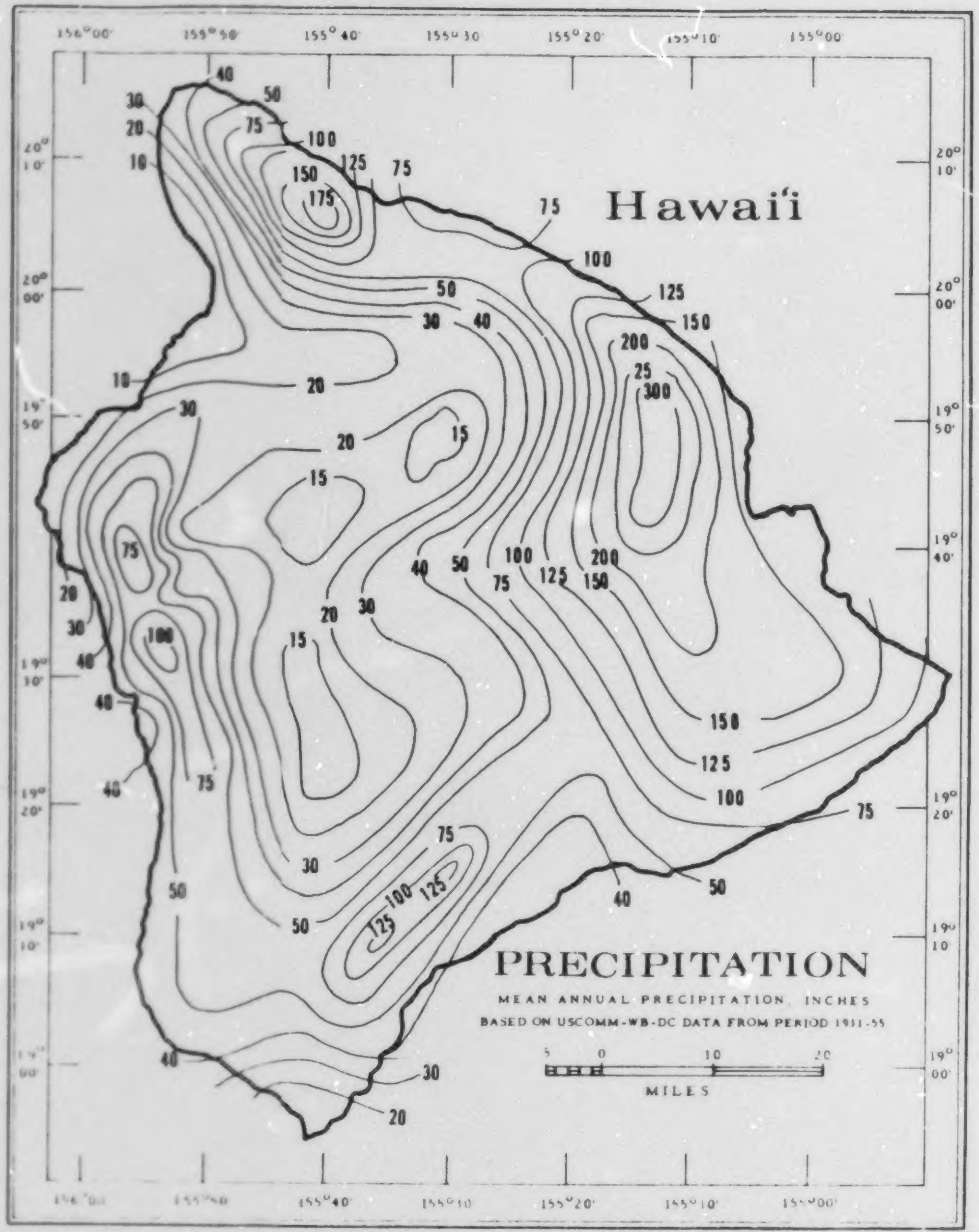

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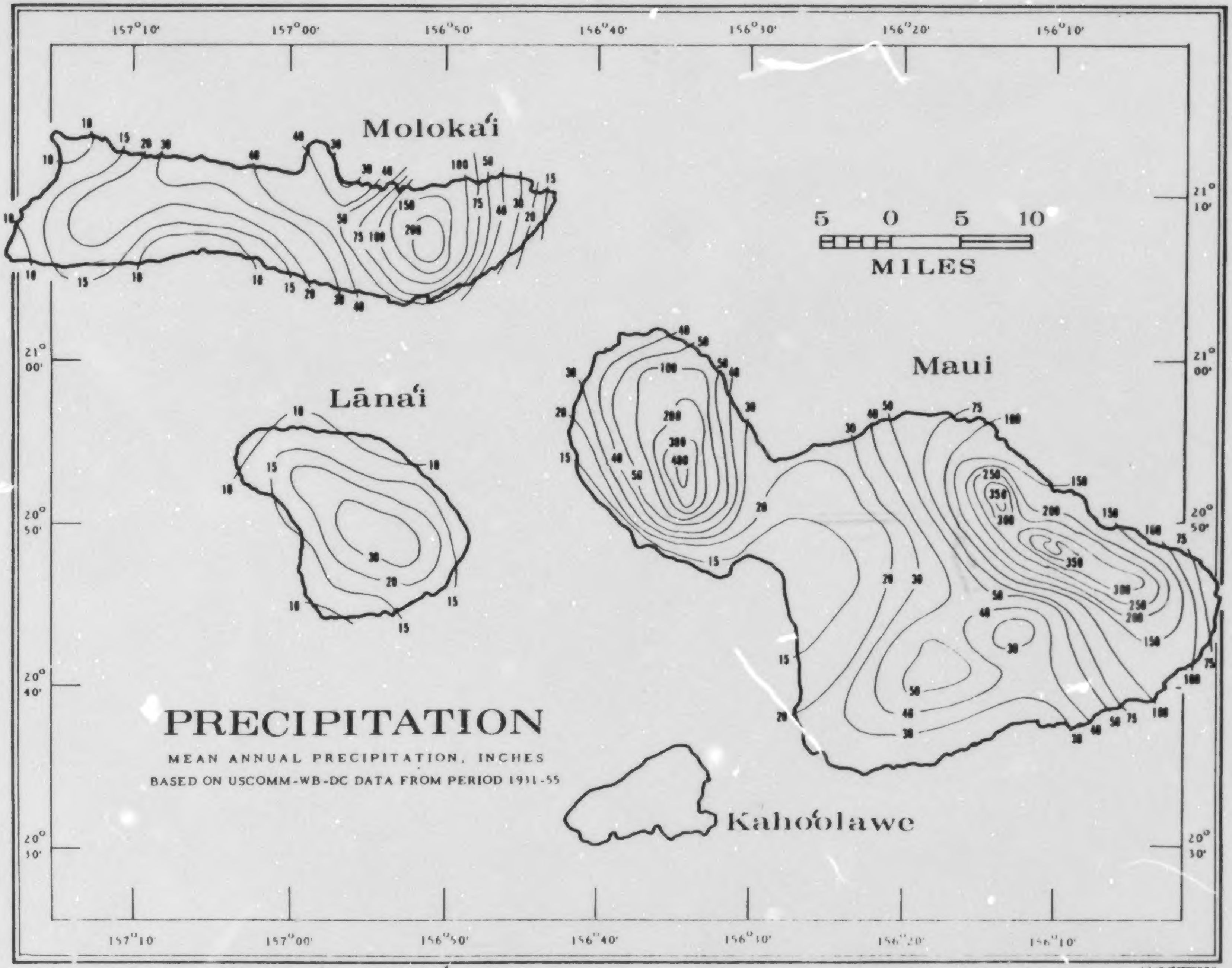
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BASED ON USCOMM-WB-DC DATA FROM PERIOD 1931-55

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HAWAIIAN CONCEPTS DEPICTED IN ARTWORK IN THIS GUIDE

Concept	Meaning	Page in Guide
'Imi Na'auao	To seek knowledge; scholarship	xii
Mana	To have supernatural or divine power; spiritual force	47
Alaka'i	To lead; leadership	71
Kūkākūkā	To discuss; consultation	121
Kapu	To impose a taboo; sacredness	151
'Aumakua	Family guardian spirit; to honor a departed family member as such	173
'Ho'okipa	To be hospitable; hospitality	203
Hilina'i	To trust; trustworthiness	224
Mālama	To care for; conservation	255
No'eau	To be skillful, clever, wise, artistic; skillfulness, cleverness, wisdom, artistry	272

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Hawaiian Time, Hawaiian Aloha Records, 5301, Irmgard Aluli and the Farden Family.

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I Am What I Am, Decca Records, 1001, Danny Kaleikini.

Ka Nani O Kaua'i, Pumehana Records, PS-4917, Nā Kaholokula.

Keiki O Waimānalo, Tradewinds Records, TS-1201, Waimānalo Keiki.

Mele Hula, Noelani Records, NRS 102, Volumes I & II, various artists.

Mele Inoa, Poki Records, SP 9003, Ka'upena Wong and Pele Pūku'i Suganuma.

Mokulana, Banyon Records, 700, Leon and Malia.

The Musical Saga of the Hōkūle'a, Music of Polynesia Records, MOP-43000, Roland Cazimero and Keli'i Tau'ā.

Nā Mele Hawai'i No Nā Keiki, Hula Records, HS-510, Lani Lahela and Nina.

Pua 'Ōlena, Pumehana Records, PS-4920, Lim Family.

This Is Eddie Kamae, Hula Records, H-513, Eddie Kamae with the Sons of Hawai'i.

You Gotta Feel Aloha, Chaale Records, CRS-7777, Al and Clayton Nālua'i

45-rpm Record

"Alu Like," Prism Records, Haunani Apoliona. (If unavailable in record stores, check with Alu Like, Inc. on any island.)

LIST OF FILM REFERENCES

Reference Number	Film Name
0279	"Biography of a Fish"
5681	"Coral Jungle"
4148	"Coral Reefs"
5728	"Great Barrier Reef"
3685	"Hawaiian Fishhooks"
1170	"The Hawaiian Islands: Their Origin and Nature"
HPT 1974-TAC	"Kalākaua Family"
1540	"King of the River"
3144	"What Is a Fish?"
0930	"Fish Are Interesting"
3395	"Sports of Old Hawai'i"

FILMSTRIPS

"Ki'i Pōhaku"	Petroglyphs, provided to all schools for fourth grade
"Foods of Hawai'i"	Provided to intermediate schools for seventh grade
"Resources of the Ahupua'a"	Available from the University of Hawai'i, Curriculum Research and Development Group, College of Education; part of The Shaping of Modern Hawaiian History, good teacher information

SONGS AND CHANTS

TITLE	UNIT	PAGE NO. IN HSCG	TITLE TRANSLATION/ SONG TOPIC/SUBJECT	OTHER SOURCES*
Aia Lā 'O Pele	I	19, 42	Hi'iaka's description of Pele	Mele Hula, LP, Noelani Records Mele Inoa, LP, Poki Records
'Alekoki	VI	193	'Alekoki pond, Nu'uanu Stream	NMHN, pp. 32-33
Aloha	V^{a}	111, 116	Meaning of aloha	Hawaiian Time, LP, Hawaiian Aloha Records
Aloha 'Oe	V^{b}	131	Love song used as song of farewell	EHHK, p. 4
Alu Like	V^{a}	113, 117	Working together	
'Āinahau	V^{b}	131	Princess Ka'iulani's Waikīkī home	EHHK, p. 5
Arirang	II/III	63	Korean folktune about Arirang Mountain	Kelly. Folk Songs Hawai'i Sings, p. 72
'Auhea 'O Ka Lani Lā?	V^{b}	133	Name song for William Charles Lunalilo	NMHN, p. 36
Blue Flower	II/III	63	Chinese folk song	Kelly. op. cit., p. 66
E Pele, E Pele	I	17, 46	Name chant for Pele	
Hanohano Hanalei	VI^{c}	193	Place name song for Hanalei, Kaua'i	NMHN, p. 41
Hawai'i Pono'ī	V^{b}	131	National, Territorial, State Anthem	EHHK, p. 16
He Inoa No Likelike	V^{b}	131	Name song for Princess Miriam Likelike	Comp. Musicianship Prog., Zone 3, Book A, pp. 230-246
He 'Ono	VII	215	Various fish delicacies	NMHN, p. 48
Hilo Hanakahi	I	9	Rains/winds of the districts on Hawai'i	NMHN, p. 50
Hoe Aku I Kou Wa'a	II/III	72	Canoe paddling song	

*OTHER SOURCES:

EHHK - E Hīmeni Hawai'i Kākou, compiled by Noelani Māhoe, Governor's Committee, 1973. (Accompanying tapes; sent to all school libraries)

NMHN - Nā Mele o Hawai'i Nei, 101 Hawaiian Songs, collected by Samuel H. Elbert and Noelani Māhoe, UH Press, 1970.

TITLE	UNIT	PAGE NO. IN HSCG	TITLE TRANSLATION/ SONG TOPIC/SUBJECT	OTHER SOURCES*
Hohoa Kuku	IX	285	Song for beating kapa	
Ho'okupu Chant	V^c	159, 172	Song for the Makahiki Festival	
Huki I Ke Kalo	VI	191, 202	Steps in the poi-making process	
Hukilau	VII	215	English lyrics about seine net fishing	Alfred Apaka's Greatest Hits, LP, Capitol Records
Humuhumunukunukuapua'a	VII	221, 234	English lyrics about the trigger fish	Hawaiian Time, LP, Hawaiian Aloha Records
I Am What I Am	II/III	59	Reinforcing positive self-concept	I Am What I Am, LP, Decca Records Comp. Musicianship Prog., Music, Grade 6, p. 3
Iā 'Oe E Ka Lā	V^b	129	Name song for King Kalākaua	NMHN, pp. 55-56 Mele Inoa, LP, Poki Records
Kā I Ka Hoe	II/III	70	Canoe paddling song	Keiki o Waimānalo, LP, Tradewinds Records
Ka Inu Wai/Maika'i ka Makani o Kohala	VIII	261, 270	Place name song for Kohala, Hawai'i	
Ka Na'i Aupuni	V^b	129, 136	Song honoring Kamehameha and other chiefs	Comp. Musicianship Prog., Zone 3, Bk. A, pp. 250-254
Ka Ua Loku	VI	193	The pouring rain of Hanalei, Kaua'i	NMHN, p. 62
Ka Uluwehi O Ke Kai	VII	223	Plants of the sea - limu (seaweed)	Hi'ipoi I Ka 'Āina Aloha, LP, Hula Records
Kāne'ohe	VIII	262	The bringing of electricity to Kāne'ohe	NMHN, p. 61
Ke Ānuenue	I	11	Rainbows and other natural phenomena	Hawai'i's Leo Nahenahe Singers, LP, Tradewinds Records; EHHK, p. 81
Ke One Kaulana O Hawai'i	IV	95	Place name song about the districts on the Island of Hawai'i	Hi'ipoi I Ka 'Āina Aloha, LP, Hula Records
Kilakila 'O Haleakalā	IV	95	Haleakalā mountain, Maui	NMHN, p. 66
Koa'e	V^c	169	The tropicbird	Hawai'i's Folksingers, LP, Tradewinds Records
Kokōhi	VI	193	Love song about spring water and one's search for happiness	NMHN, pp. 66-67
Kua Loloa Kea'au	I	19	Chant about Pele	Ha'aku'i Pele I Hawai'i, LP, Hula Records
Kupa Landing	IV	95	Cooper's Landing in Ho'okena, Hawai'i	NMHN, pp. 68-69

TITLE	UNIT	PAGE NO. IN HSCG	TITLE TRANSLATION/ SONG TOPIC/SUBJECT	OTHER SOURCES*
Ku'u Home O Nā Pali Hāuliuli	IV	95	Song honoring the composer's home in Kāne'ohe, O'ahu	NMHN, pp. 69-70
Ku'u Lei Pūpū	VII	217	My shell lei	NMHN, p. 72 EHHK, pp. 84-85
Ku'u Pūpū Kau Pōhaku	I	23	My shell clinging to the rocks	EHHK, pp. 86-87 Nā Mele Hawai'i No Nā Keiki, LP, Hula Records
Ku'u Wa'a	II/III	67	My canoe	EHHK, p. 36 Nā Mele Hawai'i No Nā Keiki, LP, Hula Records
Lei 'Ilima	V^{c}	163	Lei song about the 'ilima flower of O'ahu	King's Book of Hawaiian Melodies, p. 74
Lili'u E	V^{b}	129, 135	Name song for Lili'uokalani	Keiki O Waimānalo, LP, Tradewinds Records
Lovely Narcissus Flower	II/III	63	Chinese folk song	Young & Lum, ibid.
Makalapua	V^{c}	163	Name song for Lili'uokalani	Hausman. Hawai'i: Music In Its History, pp. 76-77 EHHK, pp. 42-43
Manu 'Ō'ō	V^{c}	169	Song about the 'ō'ō bird whose feathers were used to make precious featherwork	NMHN, p. 77
Nā Hala O Naue	V^{c}	163	Song about the famous pandanus trees of Naue, Hanalei district, Kaua'i	NMHN, pp. 80-81 Keiki O Waimānalo, LP, Tradewinds Records
Nā Hoe Wa'a	II/III	67	The canoe paddlers	EHHK, p. 92 Nā Mele Hawai'i No Nā Keiki, LP, Hula Records
Nā 'Ono O Ka 'Āina	VII	225	Plant delicacies of the land	NMHN, p. 82
Noho Ana I Hilo	I	21	Chant for Pele	Ha'aku'i Pele I Hawai'i, LP, Hula Records
Old Plantation	VIII	260	Place name song for the Ward Estate, now the Neal S. Blaisdell Center (NBC)	NMHN, p. 82
'Ōpae E	I, VII	25, 219 34	Various sea creatures are asked to save a young girl held captive by a puhi (eel)	Hawaiian Hula Eyes, LP, Mountain Apple Co. Mokulana, LP, Banyon Records This Is Eddie Kamae, LP, Hula Records
Planting Rice	II/III	61	"Magtanim ay di biro," Philippines folk song	Kelly. op. cit., p. 56
Pua Aloalo	V^{c}	163	Hibiscus flower	Nā Mele Ho'ona'auao/HS Music Resource Book

TITLE	UNIT	PAGE NO. IN HSCG	TITLE TRANSLATION/ SONG TOPIC/SUBJECT	OTHER SOURCES*
Pua Kukui	V^c	163	The flower of the candlenut tree (the State Tree)	*Johnny Noble's Collection of Ancient and Modern Hula*, p. 18
Pua 'Ōlena	V^c	163	The flower of the turmeric plant	*Ka Nani O Kaua'i*, LP, Pumehana Records *Pua 'Ōlena*, LP, Pumehana Records
Pūpū O 'Ewa	VIII	262	Place name song honoring the 'Ewa district and Ka'ahupāhau, the Shark Goddess of Pu'uloa (Pearl Harbor)	NMHN, pp. 87-88
Sakura	II/III	61	Cherry blossom folksong from Japan	Kelly. *op. cit.*, p. 42
Siva Siva Maia	II/III	61	Samoan dance song	Kelly. *op. cit.*, p. 34
Sweet Leilehua	V^c	163	Garland of *lehua* blossoms	Hausman. *op. cit.*, pp. 42-43
Wai O Ke Aniani	VI	193	Cool, crystal clear water	NMHN, pp. 93-94
You Come My House	VIII	263, 274	Local hospitality, introduced foods	Melody on *Waikīkī Beach Girl*, LP, Tradewinds Records (different lyrics than those used in this guide)